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THE OÖLOGIST,

FOR THE STUDENT OF

BIRDS, THEIR NESTS AND EGGS.

VOLUME XVII,

ALBION, N. Y.:

FRANK H. LATTIN, M. D., PUBLISHER.

1900.

A. M. EDDY,
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1900.

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THE OÖLOGIST.

A MONTHLY PUBLICATION DEVOTED TO
OOLOGY, ORNITHOLOGY AND TAXIDERMY.

VOL. XVII. NO. 1.

ALBION, N. Y., JANUARY, 1900.

WHOLE NO. 162

Wants, Exchanges, and For Sales.

Brief special announcements, "Wants," "Exchanges," "For Sales," inserted in this department for 25c per 25 words. Notices over 25 words, charged at the rate of one-half cent per each additional word. No notice inserted for less than 25c. Terms, cash with order.
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Examine the number following your name on the wrapper of this month's OÖLOGIST. It denotes when your subscription expired or will expire.

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165	"	"	"	"	April, 1900
170	"	"	"	"	Sept. "

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THE OÖLOGIST.

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THE OÖLOGIST.

A Monthly Publication Devoted to

OÖLOGY, ORNITHOLOGY AND
TAXIDERMY.

FRANK H. LATTIN, Editor and Publisher,
ALBION, N. Y.

Correspondence and items of interest to the student of Birds, their Nests and Eggs, solicited from all.

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FRANK H. LATTIN,
Albion, Orleans Co., N. Y.

that I have a particular liking for the Purple Martin (*Progne'subis*) helped to influence the writer to erect a bird house in the corner of the yard, in front of my boyhood home in Farmington, Me., for the purpose of having a better chance to study these interesting birds that were seen about the place for a few days in the spring, but having no house to go to, went to some other locality to breed.

So in the spring of '87, before the birds arrived, I built a plain white house of good size, with five apartments, and spacious steps before each door for the birds to alight on, and a place to sit on before the door and sing. This I made fast to a long pole and placed in the corner of the yard and facing my own room that I might sit in the window and look out upon this house. The many quarrels I witnessed as well as the cheerful songs I listened to from my window more than repaid me for erecting the house.

About the middle of April the house began to make history in the way of a pair of White-bellied Swallows (*Tachycineta bicolor*) that had nested in a hole in the limb of an apple tree in the orchard near by for several years, before coming to this house. Here let me mention that the locality was on the top of large hills, high up, and about one mile from any body of water. This swallow usually nests near a body of water.

On the arrival of these swallows they took it for granted that this house was erected for their special benefit, and took possession with very little ceremony. They began to carry dead grasses to the upstairs rent, and later profusely lined the nest with feathers.

A Bird House.

In the May and June, 1896 number of the Oölogist was an interesting article, "The History of a Bird House," by H. G. Parker. This article, with the fact

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They completed their nest and were ready to lay their eggs about the first of May, when a pair of Martins came. The Martins seemed to think their cousins, the swallows, were out of place in leaving their old site and taking the home that was built for them, and a quarrel was begun. The female swallow would sit in the door, and the male perched upon the top of the house. The Martins circled about the house singing their song usually heard in the early morning.

The swallows stood quiet and resolute to defend their house and awaited an attack. Soon the Martins circled nearer and nearer and made an attempt to alight on the house, but were repulsed by the swallows. After one Martin had been prevented from forcing an entrance the other one would make an attack. At first they only swooped near the swallows as if to measure their adversary's courage and strength, but after a little manouvering they would grapple with a swallow and they would flutter over and over each other and fall to the ground, sometimes exhausted. But the swallow would at once return to its door stool ready for another attack. Whenever the male swallow would return to his mate he would caress her and chatter away as though telling her he had beaten the Martins. This would take place in the morning, and after two or three hours of hard fought battle the Martins would retire, leaving the swallows in possession of their well defended home. In the afternoon the Martins would return and make a shorter struggle, then leave till the next morning. This struggle went on for about a week and it was difficult to say which would be the victors, but after about a week's struggle the Martins forced several entrances.

They did not want the other apartments, but that very one the swallows occupied. Soon the swallows tired of the fight, and wishing to rear their

young in peace, also feeling that the Martins were getting the best of them, retired from the scene of battle and immediately built in the old site in the apple tree, leaving the Martins to occupy their newly acquired possessions. They were very proud of their acquired dominions, and would sit at the entrance the swallows had occupied and sing as never Martins sang.

They did not remove all the nest of the swallows, nor did they occupy it, evidently thinking it too downy an affair for their use, but built one of coarse grasses, with a small quantity of mud intermixed, on the whole a rather coarse structure. They reared their young unmolested. In this locality they do not rear but one brood in a season, and leave in August for a warmer clime.

The next year the swallows returned April 17th, and made at once for the bird house. They staid about it, and soon began to build a nest in the apartment they had chosen the previous year, and seemingly had forgotten their unpleasant evacuation the year before.

They were very happy in building this nest as usual, and took the same trouble with it, and lined it very neatly as before, and succeeded in laying two eggs before driven out in the same manner as the year previous. But they had to go, and as before took up with the old site in the orchard.

In the spring of '89 the swallows arrived April 16th, and the same story was repeated as in the two years previous. After the Martins had left a belated Bluebird (*Sialia sialis*) built a nest in one of the lower apartments and reared a brood of four young.

The spring of '90 the Swallows had four eggs laid, and incubation begun, before the Martins drove them out. The four eggs I found on the ground beneath the house were the Martins had thrown them.

Thus the struggle between these cousins went on for the next six years and I

began to think the swallows would get discouraged and give up the dispute. But the year of '96 the Swallows came near "holding the fort," the Martins not seeming to have the determination to win which they had previously shown. But in '97 the tables were turned and the swallows carried the day, and the Martins left for parts unknown.

The year '98 but a few days' struggle took place and the Martins left as in the year before. Last year the Martins appeared, but made but little effort to gain their old home.

Several times during the early years of this bird house the Bluebirds that nested in the orchard made a little fuss with the swallows. But the acts of the Bluebirds seemed more like their usual inquisitiveness, a habit they have of peering into every knot hole or cavity that they spy out. The Bluebirds were determined to peer into the apartments and would sometimes sit on the step outside and warble for a short time, then fly away. The swallows resented this, and sometimes a lively contest took place; but I do not believe the Bluebirds intended to monopolize the swallows' nesting site.

Twice I tried to end the contest between the swallows and Martins by removing the nest of the swallows, and thus help the Martins as I wanted the Martins to occupy the house, knowing that the swallows would nest in the orchard. Thus I could keep both birds about the place. But this did not help the Martins, for the swallows stuck to the place as determinedly as before until driven out.

This fall the strong winds blew the house down, but this does not I hope end the history, as my younger brother has re-erected it, and I hope to record further history of this house that has brought me so much pleasure and thought, for several years to come, as I spend part of my vacation on the place.

J. MERTON SWAIN,
Portland, Me., Dec. 16, 1899.

Louisiana Water-Thrush.

This shy and interesting bird arrives in this locality on the last days of April or early in May and almost immediately begins to build its nest.

It was in the early morning of May 21, 1899, that I mounted my wheel and took a spin over the hill to the mouth of a large gully, where I dismounted. Just over a large waterfall a Water-Thrush left the bank and flew up the stream as I came along. Going to the place she flew from I saw, placed in a little hole under the overhanging bank, a pretty nest of dried leaves deeply cupped and lined with dead pine leaves, grass and rootlets. It contained six eggs of a creamy white, thickly spotted with several shades of reddish brown and they were within a few hours of hatching. The bird kept out of sight in the bushes along the bank, but I could tell where she was for she continually sounded her alarm note, a sharp metallic *chink, chink*. But finally she came out in plain sight.

On up the gully in a secluded spot I saw a Water-Thrush, evidently her mate, sitting on a limb which was hanging over the water and he was singing such a wild spiritous song as I have heard from no other bird of my acquaintance. This song is one of the very best of bird songs and heard in the deep gully with the accompaniment of the running water there is nothing to compare with it.

Leaving this gully I went across the valley to another gully. Soon I heard the *chink* of a Water-Thrush and saw him running, teetering along the stream and pecking about nervously. Advancing cautiously I saw the female sitting on her nest in a hole in the bank. What a pretty picture she made as she sat looking timidly at me, until her fear getting the better of her, she flew to her mate, who had been trying his best to draw me away from the nest.

There were five young of nearly a week in the nest, which was of dead leaves, moss and hemlock twigs, lined with rootlets.

Retiring a short distance I watched the old birds. They ran about, up and down before the nest, teetering all the time and drawing nearer to the nest each time until suddenly the female flew to the nest, staying but a moment then joined her mate again. After a little she flew to the nest again staying but a moment as before. Then both birds flew up and around me going down the stream.

On up the gully I saw another bird and soon found another nest, situated like the other in a little hole in the bank. It contained three eggs and two young just out of the shell. Going up stream about 40 feet I sat down to await developments. The female soon returned to the nest and the male came around near me. He had a worm in his bill and suddenly he flew to the nest but away again almost instantly, then after a little he flew to the nest again where he remained for some time. He stood on the edge of the nest poking his bill into the female's mouth, then glancing at me and teetering all of the time. After leaving the nest he flew to the ground quite close to me and then away he went after another choice morsel for his mate.

I found another nest June 2d which was under a little ledge formed by some roots and dead leaves beside a very small bush on the gully bank only three feet from the running water. The nest contained five fresh eggs and the female acted much as the others did.

About a week after this I was in a large swampy wood and Water-Thrushes were real common. We met several families. The young ones were just learning to fly and were closely watched by the old birds.

VERDI BURTCH,
Penn Yan, N. Y.

The Brown Creeper.

Certhia familiaris americana, Ridgw.

It always afforded me great pleasure while rambling in early spring through the woods to observe one of our liveliest little Creepers start at the foot of a large tree and run in zigzag lines to almost the top of the tree. If he sees that he is observed he keeps on the off side of the tree instead of running up in spiral form, all the time scrutinizingly searching in the cracks of the bark for the tiny eggs of insects on which he lives. The strong tail feathers, similar to those of the Woodpecker, support his weight and the slightly curved and very tender but extremely sharp bill makes it easy for him to secure his prey. The bill, however, is not strong enough, as is that of the Woodpecker, to tear away the bark and chop holes in it to get at the worms, the borers and larva of the insects. While going over the different trees in search of food I hear him utter: "*Zri, zri, zri*" or "*sit, sit, sit*." These notes are only heard during the mating season.

The Brown Creeper is an expert climber and always watchful, searching every tree in his district from morn to night for food. On arriving at the top of a tree he invariably flies down to the next tree near the ground to repeat his upward search.

It seemed very difficult for me to find the nest and I also was in doubt whether the Brown Creeper breeds in this locality. In the first week in May, 1899, I was fortunate enough, by watching a pair of Brown Creepers in the Tonawanda Swamp, to see one step into a loop formed by the bark of an elm stump about 15 feet from the ground. I saw that the birds had started building the nest, but both being diligently in search of nesting material, I concluded not to climb to the nest but to wait a week and I was rewarded. A week later I found the male near the

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BIRDS EGGS; Singles.

BIRDS EGGS; Singles.		White-throat.....	05	Giant Fasciolaria, young.....	10	
Mew Gull.....	35	Chaffinch.....	05	Fulgur <i>perversa</i> , young.....	10	
Western Gull.....	40	Greenfinch.....	05	Lettered Olive, Fla.....	5, 10, 25	
Skua.....	75	Yellow Bunting.....	05	Inflated Olive, Singapore.....	5, 10	
California Brown Pelican.....	1 00	Hedge Sparrow.....	10	Spider Web Olive, Cal.....	5, 10, 25	
Snowy Heron.....	15	Song Thrush.....	05	Rice Shells, Fla. Keys, 12 for.....	05	
Louisiana Heron.....	15	Missill Thrush.....	10	Harp Shell, Ceylon.....	50	
Little Blue Heron.....	15	Sand Martin.....	05	Dove Shell, Jamaica 3 for.....	05	
American Coot.....	10	Willow Warbler.....	10	Thunder Storm Shell 2 for.....	05	
Oystercatcher.....	35			Lettered Cone, Ceylon.....	35, 75	
Curlew.....	75			Marbled Cone, Polynesia.....	50	
Swinson's Hawk.....	50	Gannet, 1-1.....	50	Virgin Cone, Mauritius.....	35, 75	
Kingbird.....	05	Green Heron' 1-4.....	65	Miles' Soldier, Ceylon.....	50	
Purple Grackle.....	05	Bl'k-crow'd Night Heron' 1-3.....	45	Fighting Shell, Gulf Mex.....	25	
Florida Grackle.....	15	Killdeer 1-4.....	80	Silverlip Mauritius.....	15, 25	
Brewer's Blackbird.....	05	Bell's Vireo 1-4.....	60	Orange Scorpion, Poly.....	25	
Purple Martin.....	15	Yellow-breasted Chat 1-4.....	40	Violet-mouth " Molucas.....	1.00	
Loggerhead Shrike.....	10	Brown Thrasher, 1-4.....	20	Pelican's Foot, Med. Sea.....	05	
Bell's Vireo.....	15	American Crow, 1-5.....	50	Ringed Cowry, Singapore.....	05, 10	
Royal Tern.....	50	Lapwing, 1-4.....	80	Snake head Cowry Aus.....	05, 10	
Red-breasted Merganser.....	50	Painted Bunting, n-5.....	75	Money Cowry Ceylon.....	05, 10	
Shoveller.....	50	Fulmar 1 1.....	75	Mole Cowry, Zanzibar.....	25 50	
Northern Eider.....	50	Mourning Dove 1-2.....	50	Tiger Cowry, Australia.....	35	
White-faced Glossy Ibis.....	1 00	Boat-tailed Grackle 1 3.....	45	Rye Shell, Bahamas.....	05	
Wood Ibis.....	1 00	Red-winged Blackbird 1-4.....	40	Poached Egg, Fiji.....	25	
Great Blue Heron.....	40	Tri-colored Blackbird 1-4.....	60	Hump-backed Egg, W. I.....	10	
Green Heron.....	15	Orchard Oriole 1-5.....	30	Porcelain Rump Sh'll, Bah.....	05	
Bl'k-crowned Night Heron.....	15	European Blackbird, 1-4.....	25	Paper Shell, Fla.....	25	
Red-necked Phalarope.....	75	Yellow Bunting, 1-3.....	20	Boat Shell, Mass.....	05, 10	
American Avocet.....	50	Chaffinch, 1-5.....	30	Screw Shell, Calif.....	10, 25	
Black-necked Stilt.....	50	Greenfinch, 1-5.....	30	Yellow Pea, England, 2 for.....	05	
Whimbrel.....	50	Redstart, 1-5.....	30	Brown Snail, Mauritius.....	05	
Lapwing.....	20	Song Thrush, 1-4.....	25	Tower Shell, Cuba, 2 for.....	05	
Killdeer.....	20	White-throat, 1-5.....	30	Bloody Tooth, W. I.....	05, 10	
Bob-white.....	10			White Tooth, Tortugas.....	05, 10	
Willow Ptarmigan.....	1 00			Zeora Shell, Nassau, 6 for.....	05	
Ring Pheasant.....	35			Wheel Shell, Japan, 2 for.....	05	
Mourning Dove.....	05			Goldmouth, Philippines.....	15, 35	
Burrowing Owl.....	20			Venetian Snail, Med., 6 for.....	05	
Florida Burrowing Owl.....	1 25			Black Ear, Calif.....	35	
Road-runner.....	25			Keyhole Limpet, Bah.....	05	
Golden-fr'ted Woodpecker.....	50			Owl Limpet, Pacific.....	15	
Cassin's Kingbird.....	25			Band of Tree Snail, Cuba.....	5, 15, 25	
Mexican Horned Lark.....	75			Black-mouth ".....	5, 10, 15, 25, 35, 50	
American Crow.....	10			Hunch-back Partula.....	05	
Fish Crow.....	35			Little Agate Shell, Hawaii.....	10	
Starling.....	15			Pea Nut Shell, Cuba, 3 for.....	05	
Red-winged Blackbird.....	05			Banded Melampus 3 for.....	05	
Tri-colored Blackbird.....	15			Mermaid Cradle, Pacific.....	25	
Orchard Oriole.....	15			Sun Shell (pair), W. I.....	15	
Boat-tailed Grackle.....	15			Pacific Scallop (1/2) Calif.....	15	
House Finch.....	05			Jewel Shell (1/2) Australia.....	10	
Gray-tailed Cardinal.....	35			Jingle Shell, Mass., 2 for.....	05	
Painted Bunting.....	10			Venus Shell, Calif.....	25	
Yellow-breasted Chat.....	10			Thorney Chama, Bahamas.....	15	
Meadow Pipit.....	25					
Bewick's Wren.....	05					
Mockingbird.....	05					
Brown Thrasher.....	05					
Red-leg Turtle.....	10					
Moorhen.....	15					
Mute Swan.....	2 00					
European House Sparrow.....	05					
European Tree Sparrow.....	15					
European Blackbird.....	05					
European Redstart.....	05					
European Robin.....	10					
Golden crowned Kinglet.....	1 00					
Jackdaw.....	15					
Rook.....	15					

SETS.					
Gannet, 1-1.....	50				
Green Heron' 1-4.....	65				
Bl'k-crow'd Night Heron' 1-3.....	45				
Killdeer 1-4.....	80				
Bell's Vireo 1-4.....	60				
Yellow-breasted Chat 1-4.....	40				
Brown Thrasher, 1-4.....	20				
American Crow, 1-5.....	50				
Lapwing, 1-4.....	80				
Painted Bunting, n-5.....	75				
Fulmar 1 1.....	75				
Mourning Dove 1-2.....	50				
Boat-tailed Grackle 1 3.....	45				
Red-winged Blackbird 1-4.....	40				
Tri-colored Blackbird 1-4.....	60				
Orchard Oriole 1-5.....	30				
European Blackbird, 1-4.....	25				
Yellow Bunting, 1-3.....	20				
Chaffinch, 1-5.....	30				
Greenfinch, 1-5.....	30				
Redstart, 1-5.....	30				
Song Thrush, 1-4.....	25				
White-throat, 1-5.....	30				

SEA SHELLS.					
Worm Shell, Gulf Mex.....	\$ 25				
Ark Shell, Gulf Mex.....	15				
Bubble Shell.....	25				
<i>Helix Zebuensis</i> , Philipnes.....	25				
<i>Helix fideles</i> , Oregon.....	25				
Quoit Shell (1/2).....	05				
Maggie, Bahamas.....	15, 35				
Many lined Bulimulus.....	05				
E. I. Clam (1/2).....	15				
<i>Neritina recitrata</i> , Fla.....	5, 10				
Stair Case <i>Cerithidea</i> , Fla.....	10				
Angel Wing (1/2).....	10				
<i>Bulimulus Bahamaensis</i>	10				
<i>Scarabus pyramidalis</i> , Gm.....	10				
<i>Achatinella olivacea</i> , Hawai.....	10				
" <i>spirazona</i> , Hawai.....	10				
" <i>uniplicata</i> , Hawai.....	10				
Calf Cowry, Australia.....	10, 25				
Gnawed Cowry, Australia.....	5, 10				
Cauri Cowry, Australia.....	5, 10				
Crown Shell, Gulf Mex.....	15				
Filletted Shell, Gulf Mex.....	15				
Spiral Shell, Hayti.....	15				
Rock Murex, Fla.....	25				
Thorny-nosed Murex.....	10, 25				
Pink Murex, L. Calif.....	75				
Black Murex, Panama.....	25, 75				
White Murex, Zanzibar.....	25				
Scorched Murex, Bahamas.....	50				
Woodcock Murex, China.....	10				
Leaf-back " Med. Sea.....	15, 25				
Japanese Eburna.....	25				
Fish Basket, Japan 2 for.....	25				
Foxhead, Singapore.....	25				

SEA CURIOS.					
Tail of King Crab.....	5, 15, 25				
Brown Sealey Gorgonia.....	15, 35				
Bahamas.....	15, 35				
Finger Coral, Hayti.....	15				
Red Coral, Sandwich Is.....	10, 25				
Pink Coral, Samoa.....	10, 25, 35				
Spike Coral, Bahamas.....	10, 25				
Rose Coral, W.....	10				
Mushroom Coral, Gulf Calif.....	25				
Propeller Coral, Bahamas.....	10, 25				
Branch Coral, E. I.....	5, 10, 15				
Organppte " Singapore.....	10, 25				
Precious Coral, Med. Sea.....	25				

Sets.

Gannet, 1-1.....	50	Virgin Cone, Mauritius.....	35, 75
Green Heron' 1-4.....	65	Miles' Soldier, Ceylon.....	50
Bl'k-crow'd Night Heron 1-3.....	45	Fighting Shell, Gulf Mex.....	25
Killdeer 1-4.....	80	Silverlip Mauritius.....	15, 25
Bell's Vireo 1-4.....	60	Orange Scorpion, Poly.....	25
Yellow-breasted Chat 1-4.....	40	Violet-mouth " Molucas.....	1.00
Brown Thrasher, 1-4.....	50	Pelican's Foot, Med. Sea.....	05
American Crow, 1-5.....	50	Ringed Cowry, Singapore.....	05, 10
Lapwing, 1-4.....	80	Snake head Cowry Aus.....	05, 10
Painted Bunting, n-5.....	75	Money Cowry Ceylon.....	05, 10
Fulmar 1 1.....	\$ 75	Mole Cowry, Zanzibar.....	25 50
Mourning Dove 1-2.....	10	Tiger Cowry, Australia.....	35
Boat-tailed Grackle 1 3.....	45	Rye Shell, Bahamas.....	05
Red-winged Blackbird 1-4.....	60	Poached Egg, Fiji.....	25
Tri-colored Blackbird 1-4.....	60	Hump-backed Egg, W. I.....	10
Orchard Oriole 1-5.....	35	Porcelain Rump Sh'll, Bah.....	05
European Blackbird, 1-4.....	20	Paper Shell, Fla.....	25
Yellow Bunting, 1-3.....	20	Boat Shell, Mass.....	05, 10
Chaffinch, 1-5.....	30	Screw Shell, Calif.....	10, 25
Greenfinch, 1-5.....	30	Yellow Pea, England, 2 for.....	05
Redstart, 1-5.....	30	Brown Snail, Mauritius.....	05
Song Thrush, 1-4.....	25	Tower Shell, Cuba, 2 for.....	05
White-throat, 1-5.....	30	Bloody Tooth, W. I.....	05, 10

SEA SHELLS.

Worm Shell, Gulf Mex.....	\$ 25	Zeora Shell, Nassau, 6 for.....	05
Ark Shell, Gulf Mex.....	15	Wheel Shell, Japan, 2 for.....	05
Bubble Shell.....	05	Goldmouth, Philippines.....	15, 35
<i>Helix Zebuensis</i> , Philip'nes.....	25	Venetian Snail, Med., 6 for.....	05
<i>Helix fideles</i> , Oregon.....	25	Black Ear, Calif.....	35
Quoit Shell (1/2).....	05	Keyhole Limpet, Tah.....	05
Magpie, Bahamas.....	15, 35	Owl Limpet, Pacific.....	15
Many lined Bulimulus.....	05	Band of Tree Snail, Cuba.....	5, 15, 25
E. I. Clam (1/2).....	15	Black-mouth ".....	5, 10, 15, 25, 35, 50
<i> Neritina reclinata</i> , Fla.....	5, 10	Hunch-back Partula.....	05
Stair Case <i>Cerithidea</i> , Fla.....	10	Little Agate Shell, Hawaii.....	10
Angel Wing (1/2).....	10	Pea Nut Shell, Cuba, 3 for.....	05
<i>Bulimulus Bahamaensis</i>	10	Banded Melampus 3 for.....	05
<i>Scarabaeus pyramidalis</i> , Gm.....	10	Mermaid Cradle, Pacific.....	25
<i>Achatinella olivacea</i> , Haw'ii.....	10	Sun Shell (pair), W. I.....	15
" <i>spirazona</i> , Hawaii.....	10	Pacific Scallop (1/2) Calif.....	15
" <i>uniplicata</i> , Haw'ii.....	10	Jewel Shell (1/2) Australia.....	10
Calf Cowry, Australia.....	10, 25	Jingle Shell, Mass., 2 for.....	05
Gnawed Cowry, Australia.....	5, 10	Venus Shell, Calif.....	25
Caurl Cowry, Australia.....	5, 10	Thorney Chama, Bahamas.....	15
Crown Shell, Gulf Mex.....	15		
Filletted Shell, Gulf Mex.....	15		
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nest. He uttered no notes but ran up and down the nearby trees so as to be close to the nest. By quietly watching I found that the loop of the bark was about 5 inches wide and in all about 6 or 7 inches long. All of the lower part was filled with a few small dry leaves, little twigs, the thickest like a knitting needle protruding about an inch on both sides of the loop, then a layer of fine soft pieces of bark, and interlined with plant fibers and wool and fine feathers. The cup of the nest, about an inch wide and four inches broad, was lined with the finest and softest down. To my joy the nest contained 6 small clear white eggs, spotted with reddish brown, mostly around the larger end, 3 in form of a wreath and 3 with large spots. I have nest and eggs in my collection and prize them highly.

A week later I took a nest of Chickadee containing 8 eggs, and if I find time in the near future will give a description of same. As far as I know no description of these two species from this locality has appeared in print.

ED. REINECKE,
Buffalo, N. Y.

"The Oologist's Association."

Circulars are out relative to a proposed meeting of the members of the Oölogist's Association. This meeting will occur the present year if the plans of its promoters are successfully carried out, and I sincerely hope that there will be a representative gathering of the so called Oölogists of America. Every bird lover in the United States has interests at stake in this forthcoming meet and all are interested in the points to be discussed.

But, Mr. Editor, there are many points at variance between the true lovers of birds and the so-called oologists, who in the main may much better be called "egg collectors" and in many cases "crank collectors" without

a particle of scientific interest. There are, most unfortunately, far too many cheap collectors of eggs, or wealthy buyers of their collections who have next to no knowledge of ornithology, and who think that the whole interest centers in amassing a lot of sets of bird's eggs with the accompanying data. Out of this class of fad collectors I say, if I had it in my power to prevent this indiscriminate collecting of eggs and amassing of large collections for private use I should make the power operative at once. And let me add that there are thousands of the true lovers of our feathered friends in this country who are anxious that congressional action shall be taken as to the protection of our birds against the fad collectors of this land. Indiscriminate collecting is getting altogether too common. It is a nuisance in the community and a menace to our future prosperity, notwithstanding that it is followed under the flimsy guise of so-called scientific collecting.

The writer has been a collector in his day, and takes pleasure in inspecting a new find, but there are limits, and after careful consideration the decision has been arrived at that the matter of egg collecting has been vastly overdone for many, many years. I am a friend to the birds and wish to promote their interests, and this article is written with the intention of appealing to the members of the "Oologist's Association" as well as to the masses to protect the birds of this country, our friends who are so much in need of protection.

What is oology anyway? If any class or set of collectors think that the comprehension of the word embraces the ordinary collector of bird's eggs, they are in error. Now let me express myself as to my opinion as to what constitutes an oologist. Oology, as an outdoor study is a branch of ornithology, and nothing more, and the man who presumes to elevate it above the study

of birds is as foolish as those who profess to be good ornithologists without knowing anything about the nesting habits of the common birds they study. As I understand it a capable ornithologist must understand the nomenclature of birds of his section, while the egg collector should be able to identify the owners of the nests which he studies. But how often we find the so-called oölogists barely capable of naming the bird by the egg, while thousands of them would not be able to name the bird if they saw it away from the eggs. That this is true all observers of this class of fad collectors are fully aware.

Many collectors gather eggs, as they do all other specimens just because their acquaintances are engaged in the business, as it is too often called. I am sorry to say that fully ninety-nine boys out of one hundred would not collect eggs were they not stimulated by the efforts of acquaintances. Thus the censurable pastime goes on to the detriment of our happy songsters.

Let me say a word about work in the field. You may be a most enthusiastic bird's egg man with a wish to devote all your time to a study of eggs and nests, but let me tell you that it is more to the purpose if you will also observe in other departments of natural history. In a short time you can familiarize yourself with the reptiles, mammals, insects and plants as well as adding valuable notes to your betterment. No one can afford to be in the woods without a note book if he ever expects to become a well versed nature-lover. After a year's effort at this advanced work you could not be hired to omit the note book from your rambles.

Amateurs are too liable to rush into collecting with a zeal which is more a result of collecting greed than it is from a real scientific love of the study. Thousands of foolish boys and young men slash into the birds and eggs for a season or so, intent only on securing

all they can, and desirous of outshining their companions in the nefarious fad. Such as these rarely make true lovers of the study; the class however, is a large one. I wish there was a law for the imprisonment of all the collectors of this class, or rather a law that could be made operative with their parents. Laws there are plenty of them, but one rarely hears of prosecution.

There should be a shut down on all nest robbing by boys and by many older persons, people old enough to know better. Parents, guardians and teachers should give strict orders in reference to bird protection, and as well by instruction give the children a love for the birds and other creatures of the wood and field; teaching the boys and girls to observe and study and not to destroy. It is always a pleasure for me to converse with an observing child or older person, but it is distasteful to any lover of our feathered friends to look over a collection of poorly prepared eggs and skins, many improperly identified, and nearly all of which the collector knows nothing of excepting the meager notes embraced in the data blanks. When the boy or man stoops to this style of collecting, and I am sorry to say that there are many of them among us, he is as low as the thoughtless women who make use of feathers for adornment. Now boys and all others may render a valuable service in the line of nature study if they will go at the matter in the right manner.

This article is already too long, but I hope others will take it up and advance the cause that is herein advocated. Let us hope that the Oölogist's Association, if it meets, will take action to protect the birds and eggs and not to confine their attention too fully to the consideration of matters that generally occupy the attention of the average fad collector and to the exclusion of truly economic interests.

Respectfully yours,
MORRIS GIBBS, M. D.

B. F. Bowdish Dead.

At the breaking out of the war between the United States and Spain, among the volunteers from this section was Beecher S. Bowish, who enlisted with the National Guard of the state of New York, going with the Geneva company. Although the company never reached the front, but spent its time subject to call at Camp Black and in Virginia, he remained ready for duty until the company was mustered out. Following a short stay here at home, he reinlisted in the 11th Infantry, becoming a private in Company E and was ordered at once to Porto Rico, where he has been on duty since last spring. During his sojourn there very interesting letters from his pen have been received, giving minute descriptions of soldier life, the habits and customs of the natives, together with a full description of the country, its scenery, products and other interesting features.

Yesterday morning the regular communication from Mr. Bowdish, under date of December 18, was received, and with it a note dated Vieques, Porto Rico, December 22, which reads as follows:

"I regret to have to inform you of the loss of Private Beecher S. Bowdish, the news having just been brought in by a native that Private Bowdish, while in a boat with two natives, was capsized and drowned. I believe news has been sent to headquarters at San Juan and from there to his relatives.

Yours respectfully,

"OSCAR V. ROWE,
Company E, 11th Infantry."

Mr. Bowdish leaves a father and mother, formerly of this place, but now residing in New York City.—*Phelps N. Y. Correspondent in Rochester Herald, Jan. 6th*

Death of Elliott Coues.

□ Elliott Coues, the naturalist, died at Baltimore on December 25, and in his

demise American science has lost one of her greatest men. He was born in Portsmouth, N. H., in 1842. His father, Samuel Elliott Coues, was the author of several scientific treatises of great value, so that Elliott Coues the younger came naturally to study science. He graduated from the Columbian University in 1861, and from its medical department in 1863, and entered the United States Army as medical cadet and was appointed by Surgeon-General Hammond as Assistant Surgeon in the United States Army, retaining that office until his resignation in 1881. His first post of duty was in Arizona and then in Colorado and Illinois. In both stations he investigated the natural history of the region and published several important papers. In 1873, he was appointed Surgeon and Naturalist of the United States Northern Boundary Commission which surveyed the line along the 49th parallel from the Lake of the Woods to the Rocky Mountains. After his return to Washington he published, in 1872, his "Key to North American Birds," and in 1874, "Field Ornithology." His reputation as a naturalist now became thoroughly established and he was appointed as secretary and naturalist of the United States Geological Survey under the late Dr. F. V. Hayden. He edited the publications of the Survey from 1876-1880, meanwhile conducting explorations in the West. He published "Birds of the Northwest" in 1874, "Fur-Bearing Animals" in 1877, and "Birds of Colorado Valley," 1878. He was ordered by the War Department to the frontier, but his services to science were so important that he tendered his resignation and continued his scientific career. He was a member of most of the scientific societies of the United States and many of Europe. He was elected to the chair of anatomy at the National Medical College, in Washington, and pursued some of his favorite studies for ten years, teaching human anatomy upon the broad basis of morphology and upon the principle of evolution.—*Scientific American*.

Notes on the Yellow Warbler.

On the first of May, 1899, I arose at about three o'clock and started on a long stroll, keeping my eyes and ears open all the time for my feathered friends.

When after a walk of about a mile and a half without seeing much of interest, I came to a cow pasture of a few acres in extent, overgrown with small thorn bushes and briars.

After climbing the fence, I sat down on a log to rest and listen, and was rewarded by hearing the song of several Yellow Warblers (*D. arctica*) and after a search of a few minutes, I had found three nests just completed and several more just commenced.

I sat down and watched them building, most of that morning and noticed that both the male and female carry the material of which their beautiful nests are constructed.

The female, however, seems to be the architect and builder, commencing by weaving a small ring about two inches in diameter out of coarse grey fibres of the milk weed, by way of foundation, and then builds the nest proper by taking fine fibres in her bill and turning around and around, pushing and weaving it into the foundation ring and felting it together.

While watching a pair building, a Cowbird flew into a nest just completed and deposited one of her eggs. The owners of the nest on returning showed every sign of anger, trying to throw the egg out, but in vain, as the nest was a very beautiful one, about two and one-half ($2\frac{1}{2}$) by three and one-half ($3\frac{1}{2}$) inches outside by one and three-quarters ($1\frac{3}{4}$) in diameter by two (2) inches inside.

After chirping a while to each other and both trying to rid the nest of the unwelcome egg, they both flew away and did not return again that morning.

I was so interested in what I saw that morning, that on May 15th I returned

to the pasture again and observed that where the birds were building on May 1st and the birds had seen me so much as touch the uncompleted structure, they had torn it down and moved it to some other place.

But what of the nest with the Cowbird's egg in it? Well, the birds had built another nest right over the first one, Cowbird's egg and all, making a double nest seven (7) inches long by two and one-half ($2\frac{1}{2}$) inches in diameter, the upper story of this nest containing five (5) fresh eggs.

After this date I returned every day until the eggs began to hatch to observe these beautiful little songsters.

After having seen the fight put up by this pair of the double nest against the intruding Cowbird, I thought I would try some of the other nests with Cowbirds' eggs.

So I placed an egg in two (2) other nests which were just completed and in both cases the Warblers left the nest and built another.

But in six (6) nests which contained one or more Warblers' eggs they did not seem to notice the egg in the least.

I spent many hours this summer watching *D. arctica*, for which I feel well repaid.

PAUL MORRIS,
Alliance, Ohio.

Purple Finches in Mississippi.

On February 14, 15 and 16, 1899, while the thermometer ranged from 5 degrees above to 2 below zero, a flock of thirteen Purple Finches, six males and seven females were seen here by myself.

During the cold weather the birds stayed in an evergreen tree and gorged themselves with the frozen berries.

The birds were quite tame and would let anyone come within five or six feet of them.

This is the first time I have ever heard of the birds being seen in the state.

ALBERT F. LANIER,
Vicksburg, Miss.

A Few Suggestions for the Preparation of Trophies.

Having been an enthusiastic taxidermist and collector for many years, it follows that I have preserved many specimens of the forest, field and stream as trophies. It has occurred to me that a few suggestions on the preservation of objects of natural history might not go amiss, and perhaps be appreciated by your readers. If acceptable, a series of short articles will be presented upon this subject, so that those who wish may save their trophies of the outing. In my travels the fact has been repeatedly brought to my notice that but very few of the heads and horns, fish heads, and feathered game are preserved, even where the specimens are easy to secure, and where the trophies would assist in decoration and to blazon the glory of a locality or resort. It can not be understood by one interested in our animals, fish and birds why hunters, anglers and outers do not preserve the beautiful plumage of their game birds and the big pike and trout.

Short directions will be given for the preservation of fish heads. Any fish can be preserved in a very few minutes so that it will last a thousand years by the simple introduction of a small quantity of my preservative compound; but if a good specimen is desired a greater amount of attention is necessary. It is not best to attempt an entire fish the first time, but the head may be easily and satisfactorily preserved. Cut the head off just back of the gills, where it is usually divided when dressed, and remove the flesh that can be easily cut out, also the eyes. If the head is large it is better to cut out some pieces of flesh along the inside of the jaws, which may be easily done, and the slit sewed up later. These slits should be cut on the inside of the mouth so that they will not show, and this method of working on the inside should always be followed. Now rub the inside of the mouth, eye-sockets and all the denuded parts where the flesh was removed with the preservative compound, and it is better to force some into the brain through the spinal hollow if the fish weighs ten pounds or more. Your head is now preserved and will last a thousand years, and will keep out doors as well as in the house. It can not spoil, for it is as fully preserved as an Egyptian mummy. Most anglers wish to preserve their heads in better form, and in

following this out you may spend as much time as you wish, and I may add you will not regret the time spent if you have a head worth saving. We will suggest that you have a pike's head. Cut out a piece of board, better half-inch stuff, of the size of space at back of head where cut off, and tack in this piece as a foundation, and it will support the head and fit on the wall when you hang up the work. Next stuff out the jaws to the required extent with hay, excelsior or rags, get a pair of fish glass eyes and place them in sockets with putty, and hang up the head on the wall to dry. After it is dry, say from a week to a month, remove the stuffing, wash off, paint if desired and varnish if you wish to have a fresh appearance. The fisheysmell will stick to the head for a fortnight or more and will last a month more to an extent, but will then pass away forever, and you will have a trophy which will grace any apartment devoted to specimens, sportsmens' accouterments. Of course this is the work in the rough, but it is sufficient to succeed in all cases and all anglers may preserve their heads by this means. A head mounted in this manner will last forever, even if it is hung up out of doors, as I can prove in many instances where specimens have been left out. These fish, birds and animals have been tested in this manner all over the Union and are at the present time to be found exposed to the elements all over the country.

MORRIS GIBBS, M. D.

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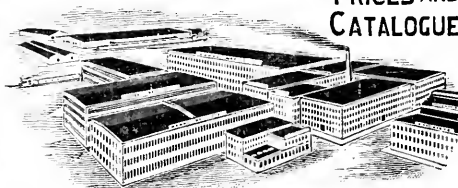
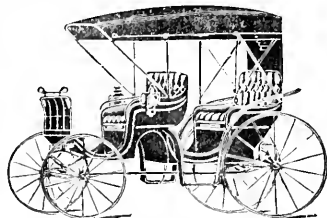
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VOL. XVII. NO. 2.

ALBION, N. Y., FEBRUARY, 1900.

WHOLE No. 163

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SETS and singles to exchange for sets not in my collection. Send your list when you write. V. L. SMITH, Imes, Kans.

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FRANK H. LATTIN, Editor and Publisher,
ALBION, N. Y.

Correspondence and items of interest to the student of Birds, their Nests and Eggs, solicited from all.

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A Robin Roost.

"Upborne with indefatigable wings,
Over the vast abrupt, ere he arrive,
The happy isle."

—Milton.

On first reading Mr. Torrey's most excellent article upon Robin Roosts, I was agreeably surprised to find that my town was the place of their nightly gathering, and on piecing the meagre description that was in the book, together, I soon made up my mind as to where the roost was, also, it then being as late as the first of September, to visit the roost without delay. Accordingly, on a cloudy Monday afternoon (the 11th), I wended my way to the spot. I did not esteem it a particularly ideal spot for *Merula migratoria* to assemble, not being especially private, or especially adapted as far as I could see. But, then, we are very apt to measure others from our own feeble penny-weight scale, and, no doubt, the traditions of the robins forbade any undue change of location. The robins' motto seems to be, "Let well enough alone." A good one from more than one point of view. "Besides," the first robin seemed to say, as he dropped boldly over my head, "we at least are not skulkers, we leave that for our betters." "Let all who hate us come and look upon us."

I had arrived just after sun down and the robins were coming plentifully when I appeared upon the scene. The roost was a large clump of white oaks, maples and birches, bounded on the south by a wet meadow, on the east by a small pond and on the north and west by a public road and small undergrowth. It commenced to rain before I had been there long, not a decided rain, but a gentle "insinuating" downfall, which seemed in doubt whether it should continue or not. The robins which were coming, in force, from the first, came faster and faster and the rain and dusk descended more swiftly, until finally, I

decided that "discretion is the *best* part of valor," and turning up my coat collar I ignominiously fled. As I looked back, the tide of robins seemed in no way diminished. In all I counted 653.

My next venture, on the 13th of September, was of a more successful nature, I being accompanied by a friend and arriving earlier on the spot than on the previous occasion. When we crossed the narrow meadow it was 4:30 o'clock, and the sun had not yet sank, so we had a fine chance for operations. My friend and myself stood side by side to count. At first there were only a few birds which we could see on the horizon, a mile away, coming toward us. Little black dots they looked and on nearing us, they either stopped at the outlying fringe of woods that bounded the meadow, or plunged over into the roost, taking, however, great care to give us a wide berth, either swinging to one side or passing over if they were high enough. The greatest numbers came at dusk and as we could only see those on the skyline and only counting on the south side of the roost, it is safe to say that at least five times the number we counted entered the roost. They made no noise, except, perhaps, an inquiring pit, pit, as they flew past us. An appreciation of the difficulties of the count can only be experienced by those who have tried it for themselves. On this evening we counted 956 robins all told.

About September 18, we made another count, but saw only about 720 odd birds.

It is evident, that most of those of the 13th were migrants on their way south, and used the roost as a sort of rendezvous on their south and northward journeys.

By September 26, their numbers had decreased to 126, and by October 7, the roost was deserted.

By comparing these statistics with Mr. Torrey's, it will be readily seen that this roost has apparently increased since 1890. Whether this is due to a warmer

spell of weather in the September of '99, or whether the roost has actually become more populous is a matter for conjecture, sufficient to say that on September 13, 1890, Mr. Torrey counted 137 robins, while on that same date, 1899, I, with a friend, counted 956, and almost two weeks later, September 26, 1899, I counted almost as many as he did on September 13, 1890, he counting on the 13th 137 against my 126 on the 26th.

This is also true, but not to so marked a degree of the only other roost I know of, namely, that at Belmont, in Middlesex county.

It is conceded by all that a love of company or gregariousness is one of this thrush's most prominent characteristics. He is a veritable socialist among birds. Not so much in the sense we use the word, as the word itself implies. He is the burglar among birds, the honest steady-going farmer, with his loud and hearty voice, and his cherry waistcoat, which by the way, is not nearly so much in bad taste as some of the apparel worn by the human species on certain out-door occasions.

Other songs may charm our ears, other beauties delight our eyes, but we will never desert our steadfast friend, the robin. No! Not even if we own a cherry tree.

Bird Life in a City Yard.

When I was a lad one of the pleasures was in observing the birds of our neighborhood, and the first annotated list which I began was on those species noted in my father's yard in the heart of the village. The list rapidly increased, and now after almost continued observation, covering a period of more than thirty years, it has grown to "the business you see," embracing one hundred and thirty-four species. The list is presented as interesting evidence of what may be accomplished through continued observation.

The yard where the notes were taken is almost exactly 5 x 12 rods in size, and in nearly the exact center of the corporate limits, which were two and a half miles square at the time when the list was begun, in the village of about 5,000 inhabitants; but at present we have a city of over 25,000. A house, barn and shed were situated on the old homestead, and several evergreens, maples, burr oaks, apple trees, and a row of cherry trees, together with currant and raspberry bushes and other shrubs, and a flower and small vegetable garden filled in the space of this typical village home. Time has greatly changed the flora and fauna, and naturally, many species of birds which formerly frequented the yard, either as regular visitors, spring and autumn, or as occasional transients are now seen no more, an undoubted result of the increased size of the city with the consequent removal of the forests surrounding the corporation. Notwithstanding the changes resulting from over thirty years in a thriving manufacturing city, there are still many species which visit us each year in migrations from the south, and a few which are fairly regular in their appearance in the winter, and there still occur occasional surprises in the appearance of little expected species.

This list embraces the species of birds seen within the enclosure of about sixty-one square rods, or observed flying above the yard.

In addition to the list presented, there are a dozen or more others which I have recorded, but feel uncertain of and so do not embrace.

Among the divers the common Loon, Red-throated Loon and strangely enough the Pied-billed Grebe, were seen flying over; the latter an unusual sight in migrations.

Of the gulls, the Herring was repeatedly seen, supposedly of the variety, and the Bonaparte's.

Few of our twenty odd species of ducks were identified among the thousands which flew over, as they generally migrate at night. However, I have distinguished the Goosander, Butterball, Pintail, Wood Duck and Mallard. The Whistling Swan has been observed sweeping over, and of the geese, the Common Brant, Snow Goose and Canada Goose have been observed, the two latter still annually observed.

Passenger Pigeons, so abundant formerly, were frequently seen in immense flocks, both spring and autumn, and when these misused birds nested in the vicinity of Kalamazoo I have known the young to straggle into our yard and once noted one which made its home in the neighborhood for several days. An occasional Mourning Dove was seen to flit by. A good sized flock of Ruffed Grouse flew bewildered into our yard, and one which came in contact with the house was stunned and captured. It was not rare to see Bob-whites in the village years ago, and they visited our lot on one occasion. These birds are still found to wander into the city, and when not molested remain for some time. It may be mentioned that within the last year that a woodchuck was captured within twenty rods of this yard and less than twice that distance from the post office. There are many other instances which point to the fact that the wild creatures, if given a chance, will associate with us.

Golden Plovers fly over in autumnal migrations. Occasionally I hear a Semi-palmated, and also the Least, Pectoral and Spotted Sandpipers as they wing their way in the dark, while the well known call of the Killdeer is often heard. The form of the Woodcock was once seen at dusk, while the towering Snipe was not rare twenty years ago, but it now confines its mating flight to the marshes. Field Plovers and Greater and Lesser Yellow-legs have been recorded from their notes.

Among the long-legged waders the Great Blue Heron is the only representative, and an immature was killed with in gun shot of our fence, and which had perched in our tall oak just previously. A Carolina Rail was found dead in the yard, as an evidence of the danger of migrating in the dark.

A Barred Owl rested in a tree in the yard. Marsh, Red-tailed, Red-shouldered and Sparrow Hawks have been seen flying over; a Cooper's Hawk was observed plying his trade among the execrated sparrows about four o'clock in the morning, and a Sharp-shinned Hawk was engaged in the same glorious work in broad daylight.

We have five species of "borers," which visit us each year; the Downy Woodpecker is hardiest of them all and is frequently seen in mid-winter. Next is the Hairy. Of the last three, the Golden-wing and Red-head are liable to visit the oaks of our yard at any date in the spring, summer and fall, while the Yellow-bellied is our visitor in spring and fall migrations, when it bores its numerous little holes for the exuding sap, especially in two weeks of the spring migration, when it is possibly a damage to the trees.

Nighthawks often fly over, as also the rattle-noted Kingfisher. The Black-billed Cuckoo is not rare, and the Yellow-billed species is one of the few birds that have been added within the last few years, as it is more abundant in this region than formerly. The gorgeous little Ruby-throated Hummingbird enlivens the garden and the vicinity of the potted plants. Swifts whirl in rapid flight above the house, and occasionally form their nests in our chimneys.

The plain little Phœbe is heard each season, while the dear melodious Wood Pewee quavers its sweet notes during the summer, occasionally nesting in the oaks. The clamorous Kingbird always appears, more often in summer, and af-

ter the nesting duties are completed. One Least Flycatcher has wandered into our yard, and I have observed one Olive-sided Flycatcher, which is very rare in Michigan, but there was no mistaking the peculiar notes, which heard once are never forgotten.

Bobolinks fly over, gushing forth in rollicking song, but never deign to alight. The stealthy Cowbird sneaks about, but I could never find that she ever made any of her unsolicited deposits in the nests of our yard. The Red-wing and Rusty Blackbirds fly over in straggling flocks, and the Meadowlark is observed above and sometimes rests in the oak tops. The Bronzed Grackle nested regularly in the evergreens before they were cut down, and still troop about in annually increasing flocks as the advantages of a city life are made known to them. Those beautiful and vivacious, as well as useful birds, the Baltimore and Orchard Orioles, both nested with us previous to the removal of the apple trees and sugar maples, and are still with us seasonally as singers. Straggling flocks of Crows fly over at all seasons, there being one hundred now where there was one a quarter of a century ago. Surely, civilization assists some species, even if it does produce extinction in some useful birds and mammals. Our Blue Jay is as abundant as formerly, and one of our old stand-bys, and his defiant scream is heard at all seasons of the year.

Among the large number of the sparrows the Purple Finch is one of the first musical species to appear from the south and he sometimes lends his presence on his way north. The Tree Sparrow is a rare visitor as he prefers the wilder sections. The Chewink has been observed but once in our yard. The White-crowned Sparrow is also a rare caller, though common outside the village. "Pea-bod-dy" is an annual loiterer, and offers his sweetest strains a little after his near relative, the White-crowned,

has departed. Chipping Sparrows are common about the hedge and piazza from April to October, and the Song Sparrow a fortnight earlier, and later, builds its nest two or three feet up in the hedge which bounds the lot on one side. A vision of color and loud but delightful song comes with the Rose-breasted Grosbeak, which has sung each season for several years, though I cannot imagine where they can nest in this neighborhood, for it is not suited to their requirements. Another singer is the Indigo bird, now seldom heard in the neighborhood. The sulphur coat of the Goldfinch is a pleasant sight to us, while the ubiquitous *passer* of imported fame is an eye-sore to the community. Of the sparrows which only appear in the colder months, may be mentioned the rare Evening Grosbeak, which visits lower Michigan at rare intervals and has been observed in our yard but during a single season. The Pine Grosbeak is another occasional winter straggler, while the red and white-winged Crossbills both visit our evergreens. The common Redpoll and Pine Siskin are occasional visitants, appearing a little after the Junco leaves us for the south, and about the time when the Snowflakes fly in compact flocks on their winter wanderings.

The cheering notes of the Red-eyed Vireo are to be heard each May, June and July, while the soul-thrilling, gurgling melody of the Warbling, and the clear penetrating staccato of the Yellow-throated Vireos are listened to with delight, though the latter singer does not nest in the neighborhood to my knowledge. That sweet singing bird of gorgeous plumage, the Scarlet Tanager, wanders into our domain in May while looking for a mate, and proves to us that a quady bird may sing divinely. The Cedarbird once built its nest in our old greening tree, and still appears irregularly in winter. The cherry trees were the attraction in summer, and the

mountain ash berries in cold weather. One White-rumped Shrike visited us years ago, and a Great Northern Shrike was captured in the winter.

Five species of swallows fly above our yard annually; the Barn, Eave, Tree, Bank and Purple Martin, the latter formerly nesting in a little bird house on the roof of the barn. The flights of these swallows are readily distinguishable. I think I have seen the Rough-wing flying but it will not be recorded, for no species are embraced excepting those positively identified. The Prairie Horned-Lark is occasionally seen above in its undulating flight, uttering its cheery chirp.

During the migrations many species of warblers are noted as they pause on their journey to search for the insect food which is their reliance. There are thirty or more species of these little winged sprites in the county, but some of them have not visited our lot, as they are lovers of wilder sections. It is strange that the Wilson's White-browed and Cape May Warblers should be seen in the city. The Black-and-White Creeping, Black throated Green, Yellow-rump and Blackburnian are the most frequently seen, and until recently were seasonally observed, while the Chestnut-sided, Red-start, Parula, Nashville, Tennessee, Yellow, Black-and-Yellow, Black-throated Blue, Bay-breasted, Yellow Red-poll and Oven-bird have only been seen at wide intervals, and some but once. At any time, from the earliest appearance in April to the latest visit of the Tennessee in late May warblers are of almost daily occurrence in the enclosure; and again in September there are flocks which frequently embrace two to four species. But none of the warblers ever remain in the neighborhood during summer.

That little busy-body, the House Wren, is a seasonal visitor, and once nested on the premises. Golden-crowned and Ruby-crowned Kinglets appear spring

and fall, and enliven us with their active movements, while the beautiful notes of the latter are heard each season. The Gnatcatcher in spring and that curious little acrobat, the Chickadee, in winter are to be found. The White-breasted Nuthatch is a resident and may be seen at all seasons, and once nested on the premises, while the smaller and less noticable Red-bellied fellow from the north occasionally straggles to our premises in fall, winter or spring. We also have that delicate mite, the Brown Creeper, which appears each year irregularly from November to May.

The Robin is seen from February to December, and regularly for over eight months of the year. It nests in the yard almost every season, and is the favorite with all. One Wood Thrush has lent its presence, while the rufous tail of the Hermit was formerly seen in the row of raspberries in the garden, where it has been known to make its home for a week at a time in the spring. The Olive-backed Thrush also visits us occasionally. Our querulous friend, the Catbird, was well known as a yearly visitor before the shrubbery and garden were cleared away. A flaunting Brown Thrasher has been known to flirt his tail in the back yard, but this was years ago and before we had taken city airs. I have even seen a Wilson's Thrush in our yard, and have marvelled that it should thus vary its habit of almost constant seclusion. Our little friend, the well known Bluebird flies over or warbles agreeably, but no longer nests in the box provided for him.

It is only in later years, and since I have had the pleasure of reading the charming work by Gilbert White of Selborne, that I have thought to place these lists and observations in print. The notes on the birds, together with the lists of insects, mammals, indigenous plants, etc., would fill a small book in themselves. Let me say as an illus-

tration, that I have identified sixty-four species of moths and butterflies in the yard, while but one each of the *chelonias* and *ophidia*, have been taken, the snake and turtle, of course, being accidental stragglers.

Of the above list of birds I have found nineteen species nesting in the yard; most of which are only occasional nesters, a few of which were found nesting but in a single instance, while four may be called fairly regular as nesters.

MORRIS GIBBS, M. D.,
Kalamazoo, Mich.

Some Summer Birds of Androscoggin Lake.

In the month of June, 1898, it was my good fortune to spend a week on the shores of Androscoggin Lake and Dead River in the towns of Leeds and Wayne, Maine, in company with my naturalist friend, Mr. J. E. Teague, of Livermore, and to observe the nesting habits of many of our common birds. It is an ideal spot for the lover of nature, this large lake dotted over with its many islands, its waters splashing the shores and the birds flitting about; and to float across its waters and feel the summer's breeze blowing about you filled with the fragrance of wild flowers and then to paddle gently down the limous waters of the Dead River. This river is the paradise of birds. To the lover of nature this scene fills one with awe that our Creator could make things so beautiful.

We had a small camp back about twenty rods from the lake and when we arrived were met by the owner, Mr. D. P. Love, who had everything in readiness for our arrival. We at once made ourselves comfortable and after a lunch obtained a boat and rowed out to several of the islands. The following is a list of the species found breeding during our week's stay at the lake.

Loon, one nest with two eggs found

on a small island of mud at quite a distance from the mainland. Eggs very light, nest composed of water grass. Every night while lying in camp we could hear the wearying cries of the Loons out on the lake.

Spotted Sandpiper. No nests were found but young birds in the down were observed and old birds could be counted by the hundred.

Downy Woodpecker. One nest was found containing young in a white birch stub leaning out over the water of the lake.

Red-winged Blackbird. Nests were found containing eggs of this species built in low bushes in marshes back from the shore of the lake and many birds of this species were observed.

Baltimore Oriole. This species was breeding. Nests with eggs were found built in old apple trees near the shore of the lake from fifteen to thirty feet from the ground.

Vesper Sparrow. Several nests with eggs were found.

Song Sparrow. This species was the most abundant of any species of Sparrow found breeding at the lake. Many nests with eggs were found on Lathrop's Island, the largest island in the lake. I found a nest of this species at the water's edge built in a mass of dead water grass and driftwood and completely roofed over and concealed from view. It was found by flushing the bird from the nest that it contained four eggs, which was the usual number found in all of the nests we observed of this species.

Tree Swallow. One nest of this species was found near the mouth of Dead River back a few rods from the water. It was built in a maple stub nearly fifty feet from the ground. The stub was honeycombed with holes made by Woodpeckers, but only one pair of Swallows was seen. They were seen to fly to a hole near the top of the stub and were, as near as we could tell at

that distance from the ground, feeding their young.

Yellow Warbler. The most abundant breeder of any species found at the lake and river. Its nests were everywhere found, built in low bushes near the water at a height varying from two to fifteen feet from the ground; eggs commonly three and four in number. Mr. Teague found one nest containing five eggs on the banks of Dead River. Its nests could be counted by dozens while the birds could be seen by hundreds.

Oven Bird. One nest was found near our camp which contained five beautiful eggs. It was a typical nest of this species.

Maryland Yellowthroat. Two nests were found on islands in the lake built in low bushes. One contained three eggs the other four. No birds of this species were seen.

American Redstart. Several nests were found built in low maples and alders from 8 to 12 feet from the ground. Eggs three and four in number.

Catbird. Very common breeder; nests in low bushes; eggs three to four in number, commonly four.

Wilson's Thrush. Nests of this species were found on Lathrop Island and the banks of Dead River containing eggs and young. It was identified as this species by Mr. Teague and no other species of Thrush was seen at the lake. Nearly all of the nests contained four eggs each.

Following is a list of the birds seen at the lake and river but not found breeding:

Black Duck. A few seen, breeds quite abundantly in the latter part of June and in July.

American Bittern. Several birds of this species were seen.

Great Blue Heron. One or two seen near Lathrop's Island.

Ruffed Grouse. Several were seen near the lake shores.

Belted Kingfisher. This species was seen but very sparingly.

Kingbird. This species was very common on the banks of the river but no nests were obtained.

Pewees. Several pairs were observed.

Crested Flycatcher. Several birds of this species seen near the river.

Least Flycatcher. Birds of this species were seen near the river in a low growth of ash and maple.

Blue Jay. Not very plentiful, a few birds of this species were seen in coniferous growth near the camp.

American Crow. Very abundant everywhere.

Savanna Sparrow. Birds supposed to belong to this species were observed.

White-crowned Sparrow. Birds of this species were seen by Mr. Teague.

Chipping Sparrow. Abundant.

Barn and Bank Swallows. Abundant flying over the water of the lake.

Cedar Waxwing. Very abundant along the river banks.

Red-eyed Vireo. Quite plentiful in woods near the river.

Chestnut-sided Warbler. Several birds seen both male and female.

Black-throated Green Warbler. A few pairs of this species were observed.

Chickadee. Very abundant.

American Robin. Very common near camp, also on the shores of the lake and river.

Bluebird. A few birds of this species were seen.

In concluding this paper, I know how very incomplete it is of the species found breeding and inhabiting this locality, but it is nevertheless a true record of species observed during our week's stay at beautiful Androscoggin Lake.

GUY H. BRIGGS,
Livermore, Maine.

Blue Jays at Play.

Reading Dr. Gibbs' interesting paper in the December number of the OÖLOGIST entitled "Performers and Singers," recalled to my mind a "performance" that I was a witness to many years ago.

Being in a newly settled part of the country, where the virgin forest was largely composed of pine, hemlock and cedar, a veritable paradise for Blue Jays, and they were there in great numbers enjoying it to the utmost of their capacity, and that is small for a bird of their size. Being seated on the brow of a high hill, in the shade of a wood behind me, looking down on a cleared flat, with a large elm tree with a wide spreading top standing alone in the centre; dead by girdling, but still retaining its ponderous branches; and having for a background a dense growth of cedar and hemlock a little distance away. Whilst surveying the situation around, above and below me, a noisy flock of perhaps twelve or fourteen Blue Jays came out of the wood behind me and made for the elm tree. They all dropped down upon the same branch, seemingly at the same time, which caused it to bend with their weight, to rebound again. This seemed to instantly suggest to the Blue Jays that they could have a teeter; so apparently with that end in view they all began to work in unison. Grasping the branch tightly with their toes they would throw their bodies up to raise the branch, then bring it down with force to send it lower; until they soon had the branch going up and down to such an extent, that on its descent some of them had to partially extend their wings to maintain their balance; whilst each seemed calling on its companions to urge them on to the utmost of their ability. At last the branch broke from their united efforts and sent the flock into the air, when they made for the cedars and hemlocks beyond, with the greatest amount of discordant noise I have ever heard from Blue Jays; which I can only compare with the screaming laughter of children over the success of some of their own pranks.

J. ALSTON MOFFAT,
London, Ont.

A later report states that B. F. Bowdich, of Porto Rico, who was reported dead in Jan. OÖLOGIST; is still living. Full particulars in March issue.

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THE MARCH issue of the OÖLOGIST was not mailed subscribers until March 31st. Hence all exchanges, ads., &c. are new and "fresh."

HAVE 100 first-class singles including 58, 71, 80, 194, 214, 201, etc., to exchange for sets or singles not in my collection. FRED BLACK, 906 Osborn St., Kalamazoo, Michigan.

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WANTED.—Large, showy eggs such as Murres, Gulls, Terns, Herons, Hawks, Grebes, etc. See my exchange in February OÖLOGIST. GUY BRIGGS, Livermore, Mass.

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WANTED.—Historical Relics of all kinds, especially small pieces of wood, etc., from historical buildings, ships, trees. Authors' autographs also desired. Send postal. HAROLD G. RUGG, Proctorsville, Vt.

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TO EXCHANGE.—A good 4-section leather covered telescope for 38 cal. auxiliary tube for 12 gauge gun. GLEN RINKER, Unionville, Mo.

WANTED.—Sets of 58, 64, 76, 218, 261, 263, 373, 387, 388, 390, 393, 394, 591, 611, 624 and others. Good exchange or cash if cheap. A. E. PRICE, Grant Park, Ills.

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HEAR YE! Hear Ye! Hear Ye! This is to certify that my advertisements in the Oölogist have paid me better than have the combined ads. in most of the amateur and natural science papers. Ads. in the Oölogist always bring returns, and it is safe to say that there is no paper having three times the circulation of this widespread periodical which can give equal satisfaction. MORRIS GIBBS, M. D., Kalamazoo, Mich.

WANTED:—Skeletons and Skulls, all kinds, in rough and mounted, Bird and Mammal Skins, Reptiles and Batrachians in alcohol or formalin. Desire correspondents in all parts of United States, Mexico and Canada. Back numbers of papers on Natural History and scientific books wanted. Offer in exchange fifty species finely prepared invertebrates in formalin, eastern bird skins, etc. Correspondence solicited. F. P. DROWNE, 20 Benefit St., Providence, R. I.

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CHOICE SETS of White Pelican, Laughing Gull, Willet, Wilson's Plover, Foster's Tern, Clapper Rail Black Skimmer, Green Heron and many others for sale very cheap. M. T. CLECKLEY, 457 Greene St., Augusta, Ga. 164

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WANTED.—To correspond with all interested in NEW YORK STATE Ornithology. DR. MARCUS S. FARR, State Museum, Albany, N.Y. 164

TO EXCHANGE:—Odd numbers of Auk, Nutt. Orn. Bull. O. and O., Oölogist, and a score of other papers and periodicals, catalogues and books on fishes, reptiles, birds, &c. Younger members of my family are interested in philately and I will exchange these books, &c. for stamps. Write for particulars and state what you have, enclosing stamp for reply. MORRIS GIBBS, M. D., Kalamazoo, Mich.

TO EXCHANGE:—Will ex. my process of Rapid Taxidermy complete. Full instructions for preserving birds, mammals, fish's heads, deer heads, &c., with one pound of compound, prepared and ready for use, and complete directions for dressing skins and pelts with the hair on for rugs, robes and hangings, together with instructions as to starting a class. Will ex. for \$3 worth of stamps of an average value of 2c. You to pay the expressage on my package, which will be 20 or 30c. This is the process which I have been selling for \$3 cash, but will sell it to you for \$1 cash. Remember that I also send the formula for making the compound, and give every detail connected with this, the most popular style of mounting specimens. Address MORRIS GIBBS, M. D., Kalamazoo, Mich.

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Your attention is particularly called to my Book Lists in the June-July and October (pages 142-143) 1899 OöLOGISTS.

If I've anything left which you want or can use I would be pleased to be informed of the fact and will endeavor to see that the matter of "price" will not be a barrier in making a transfer.

Frank H. Lattin,

Publisher of OöLOGIST, Albion, N. Y.

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BIRD-LORE

For February, the first number of Volume II, contains a full-page portrait of the late Elliott Coues, a list of over 50 prominent ornithologists, residing throughout the United States and Canada who have consented to aid bird students by responding to their requests for information and advice, and, among others, the following articles: "Concerning Birds' Tongues," (12 illustrations) by F. A. Lucas; "The Economic Value of Gulls," (illustrated) by Frank M. Chapman; "Bird Study at Oberlin College," by Lynds Jones; "Every-day Study of Birds for Busy People, including a method of Recording Notes," by W. H. C. Pyncheon; "The Season's Flight of Crossbills," (illustrated) from notes by William Brewster, J. N. Clark, and others; "The Blue-winged Warbler in Southern New York in January," by Elizabeth G. Britton; "Where the Grebes' Breasts Come from," by Vernon Bailey.

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THE OÖLOGIST.

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FRANK H. LATTIN, Editor and Publisher,
ALBION, N. Y.

Correspondence and items of interest to the student of Birds, their Nests and Eggs, solicited from all.

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shall find bones and stones, string and rags, hair and feathers, roots and bark, catkins and plant down, cast off skins of insects, snakes and even small mammals' pelts, and hundreds of other articles too numerous to mention. These articles are selected by the birds in the construction of their nests, and are gathered from far and near. Then there are the materials which many species of birds supply from their own persons, as the down of the ducks' nests, and the glue of the chimney swift, which it secretes for the purpose.

It is an easy matter to study nest construction as followed in the spring of the year, but it is much easier to study the make-up of these nests in the autumn, winter or early spring when the leaves do not cover the trees, and furthermore we are not as liable to damage our little friends, as they have left their homes for the winter in the south, and will build anew when they return to us. As quite one-third of the birds of America nest on the ground or within a very few feet of it, it is not a difficult matter to study them in their nesting habits, and as well, secure the nests for inspection and the collection. There are many amateur collectors who are very considerate in regard to robbing the birds, and prefer to watch and study rather than take the eggs. Some of these students, and I wish there were more of them, gather the different kinds of nests after the nesting season is over and label them as naturalists do with specimens in their various departments.

Thoreau, that interesting out-door observer and graphic writer, was a pleased student of birds' nests in the winter, and in one of his diary entries in January we find this: "Another bright winter's day. To the woods to see what

Nesting Materials.

The materials that birds use for nest building are many and various; and we can almost say that everything is used in nest construction by some species of bird. Among the varied assortment we

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birds' nests are made of." Let us go out with him and other observers and note what we can find.

Almost all of the larger birds which build in the tree tops, construct their homes of twigs and small limbs, and I have taken pieces all of three-quarters of an inch in diameter from a Red-tailed Hawk's nest, and have seen limbs fully four feet long in the nest of the Great Blue Heron. In these birds which select twigs and limbs, the largest birds use the heavier twigs and the smaller birds the smaller, as might be expected, and a student may often tell what sized bird is building in a tree by the twigs which fall from the structure. Very few of the larger birds devote any time to lining the big stick nests, and it is not uncommon to find hawk's and owl's nests without a particle of any material of a lining nature, the eggs being laid on the platform of rubbish. The Great Horned Owl frequently disposes a few feathers about the coarse nest which it has appropriated from the Red-tailed Hawk, as it rarely builds a nest for itself, preferring to take an old nest of the hawk, or quite as likely occupying a hollow. Nearly all of the hawks line their stick nests with small flakes of bark moss, or some grass at times. Some, as the Cooper's Hawk, at times line the nest nicely with fine roots, after the manner of the Bluejay and Catbird. One owl the Long-eared, warmly lines the structure it has stolen from the crow with feathers, and I think this bird has the warmest nest for its eggs of any of the rapacious birds of my acquaintance.

The wild pigeon builds a very poor excuse for a nest, as it is a mere platform composed of a few slender twigs, and is so loosely put together that the single egg may be seen through the bottom, and I have never found it lined in the pigeon rookeries that I have visited. Pigeon's nests are so poorly constructed that they are quickly blown from their locations, but many kinds of

stick nests last for years, and I know of old deserted hawk's nests which have retained their positions in the big crotches for twelve years or more, and the remains of the old nests of a colony of Herons are still to be seen after over twenty years of wear and tear of the storms. Many of the smaller birds build frail structures, as the Rose-breasted Grosbeak and Scarlet Tanager, which birds are so shiftless at times that the eggs may be seen through the bottoms of the nests, the roots, weeds and grass sometimes barely holding the eggs, yet again the birds build well hollowed and well padded nests.

The little Yellow Warbler selects fine strippings from weed-stalks of a hempen nature, and the nest has the light appearance of the Baltimore Oriole's home, and this light color often leads to its discovery when search is made for it. There are many other nests of the Warblers which resemble this one, being composed of similar materials, while the Goldfinch and Least Flycatcher build of nearly the same timber. Still there is enough of difference in the nests, as to form, size and make-up so that an observer can tell the owners from the nest as well as by the eggs in it. Many true students of bird habits can tell the name of the bird owner by the nest, even if it is not at home, and rarely make a mistake, and this class of observers is to be admired far more than the collectors who almost always shoot the parent bird to prove identity. It were far better to remain in ignorance of the identification of birds and nests than to destroy the beautiful birds about us. Years ago when I was a lad studying the creatures of the forest and field and works on ornithology were unknown to me, the names of nearly all of my feathered friends were of my own coinage, and at this time I cannot help but think that it was a greater pleasure to know these friends by sight than it is to now know them by their scientific

names and arbitrary classification. But after becoming familiar with these busy creatures fair, by sight, sound, home and habits, there is the added pleasure of teaching others to know and appreciate them.

In my collection of nests are delicate structures made by the Blue-gray Gnatcatcher. Fairy-like homes which seem scarce strong enough to withstand the weather for a season, yet one which I collected over twenty years ago, and which weighs less than a half ounce, has by care kept its form and delicate external lining. This magical creation, which I took from a horizontal limb of an oak at an elevation of twenty-two feet from the ground, is, or was, slightly over two and a half inches in height, and about the same in diameter, externally, while within it was nearly two inches deep and about one and three-quarters across the hollow. In composition it was mainly of minute weed-stalks and strippings of bark, so delicate that the three hundred pieces weigh less than thirty grains. These strippings which give stability to the nest are some of them over two inches in length. They were all placed in the form of a circle and in no instance vertical. These strippings mixed or blended with a few tufts of moss, still green, after all these years, small pericarps, delicate spider's nests and a few very small leaves; the latter mainly in the formation of the base. All through the structure are small bits of lichens, and this material forms the bulk of the neat home as besides being incorporated in the body of the nest it is the entire external lining. Over two thousand separate bits of lichens are used in this one nest; all being held to the sides of the home, or in the body of it by spider web and downy material from the flowering catkins. In this nest were over three thousand separate pieces of materials, all of which were brought piece meal to the limb from surrounding trees or

at quite a distance from the site. It is no wonder that the pair of Gnatcatchers was occupied a full week in constructing this nest. There are three other species of birds which ornament their nests habitually with bits of lichens. They are the Yellow-throated Vireo, Wood Pewee and the delicate Hummingbird, known as the Ruby-throat. The external lining of the Vireo's nest is not so neatly put on as in the case of the Gnatcatcher, but the work of the Hummer is beyond compare, the little cup of a nest being perfection in all its parts.

Birds have their preferences in nesting materials, and will go far from the site of the nest at times to secure the proper materials. We may go further and say that many species have specialties, and in most cases maintain their peculiar demands for certain timber for their homes. The Marsh Wrens and Orchard Orioles weave their entire structures of grass, the Wrens using green grass usually and attaching to the green grass of the marsh which gives the support, while the orchard musician invariably uses green grass, and this material gives the nest a protective coloration which is very successful. Many other birds use dry grass, the list being too long to present, but these are given as specialists.

Robins use mud in the construction of their homes and I have yet to see a nest of these well-known birds which was not largely composed of mud mixed with other materials. Many other species use mud in their nests, but the Eave Swallow is perhaps the most exclusive in the use of this material, as the entire structure of the Republican Swallow, as it is also called, is of mud with a few hairs to hold the mortar in place, and often these hairs are almost or entirely absent. The nests of the Eave or Cliff Swallow are made by the additions of little pellets of mud, which partakes of the nature of mortar and after becom-

ing dry is hard and very stable.

The Belted Kingfisher has a nest entirely of sand, for the burrow in the sand bank has no lining and the eggs are laid on the bare earth. The nest of the Loon and Grebe is composed of garbage from the lake, and often a variety is embraced in the soggy structure. Many Ducks build no nest at all, or very shiftless ones at best, but all, or nearly all beautifully line their nests with down plucked from their own breasts. Woodpeckers, though digging out their homes at great pains, rarely or never line them, and all the nests that I have examined were provided alone with a few chippings of wood. Herons compose their nests almost entirely of sticks and twigs, but some species make use of roots and moss, and sometimes the Green Heron uses grass, while the small and greater Bitterns construct their nests entirely of grass and rushes. The former usually making a platform a few inches to three feet above the water or marsh and the latter selecting some bog or slight elevation in the marsh. The Cranes make scanty nests, and generally select a pile of rubbish or a lot of marsh hay placed to their liking.

To be continued.

MORRIS GIBBS, M. D.

Kalamazoo, Mich.

Scaled Partridge.

Perhaps a few notes on the *Callipepla squamata*, Scaled Partridge (A. O. U. No. 293) as it is seen in its natural haunts will interest some of the eastern readers of the OÖLOGIST who are not acquainted with this bird in life.

Although Prof. W. W. Cooke in his "Birds of Colorado" lists this bird as a rare or accidental visitant to Colorado, it occurs in considerable numbers in the valley of Rocky Ford and in flocks of from twenty to one hundred in the foot hills forty miles to our south. Prof.

Cooke got his information from W. P. Lowe of Pueblo who perhaps never collected as far south-east as this, and perhaps missed the species and therefore caused the mistake. As this species has been but little studied I have given it extra time. Upon several occasions while collecting skins I have sat upon a rock and watched the birds as they wandered about seeking their food.

In habits the *Callipepla squamata* resembles the *Colinus virginianus* (Bob-White,) it goes about in flocks until the mating season which commences about April 1st here, but as this is the northern limit, it probably mates in March in the warmer latitudes. It is a non-migrator and there has been a flock of sixteen coming regularly every day to the barn on my ranch to get their breakfast. I have fed them when the mercury stood at 20° below zero. They get very tame when treated kindly. Although they are a Southern species they stand the winters here as well as the *Colinus virginianus* or *Callipepla californica* which are both residents of Colorado. These in the valley visit the ranchmen's feed lots and fare better than those in the hills who have to baffle deeper snow with only what food they can get above the snow. Their food consists of wild sun-flower seeds, cedar berries and seeds of two or three other plants of which I do not know the names.

At the nesting season the male will sit on some elevated object or point and call out his two notes of *chug c-h-u-g* which is nearly a whistle, (or a whistle with a grating sound) and is easily imitated by the human voice. These two notes are repeated from four to ten times, according to the bird's wishes, and are made nearly together, it taking the bird about one second to make both notes. The accent falls on the end of the last note. The key is about the same pitch as the first note of the Bob-White.

The nests are made in some depression in the Rocks, where the birds inhabit the hills, generally under a small cedar, cactus or other natural protection, with a few cedar needles or dirt for the eggs to rest upon and a few feathers from the old bird's breast as a lining, but the feathers are very scarce, sometimes lacking altogether. In the valley they nest under a sage brush, cactus or some other bush and have a nice dry nest of leaves and small sticks, although built with no system as in the case with so many birds. They lay from eight to fourteen eggs of a dirty cream color with specks of brown of different sizes.

A. R. BEYMER.

Rocky Ford, Colo.

Winter Notes.

There are but few points to be observed from my study window in the winter months; still there is more of interest than would be at first supposed. There have been over a dozen species observed, while the plant life is worth studying. For instance, there is a little garden bed under my window which was carefully made over on the 28th, of last October, yet from this bed has sprung a mass of chick weed that has blossomed off and on for over a month and at this date, February 9th, 1900, is covered with buds, although covered with snow. The snow has come and gone four times this winter, and twice we have had zero weather, yet, although the weather was below zero on the first of this month still the little chickweed showed a great mass of buds under the snow.

Among the birds the Blue Jay is the most regular in appearance and hardly a day passes that these droll fellows are not seen and heard near our house. The Jay is the most ubiquitous of all the birds in this country. Not far from our house and in plain sight from my window are two large oaks and in each

tree is a nest. These nests undoubtedly belong to the same pair of birds and they have probably been occupied by them at various times, and the devoted pair shows considerable interest even in winter. As my seat faces the oaks I can see all that is going on in the trees and and may keep watch of my friends with very little loss of time.

The Jays are to be seen almost every day and when the weather is not too severe and often when the temperature is down as low as ten degrees above zero; and they may be heard shrieking defiance at old Boreas when the snow is flying and the windows rattling.

This particular pair of Jays frequently visits the oaks where the nests are built, and four times during the space from November to early February I have seen the birds visit the nests and hop into the cup and sit there as if it were spring, and remain in that position for a full minute. Then the pair would hop about the site as if in memory of the past season, or more probably in anticipation of the coming season. It is very unusual for birds to occupy nests in the winter season, and I know of no other instance where this occupancy has been observed in the case of those birds which build open nests after the manner of the Jays. There are some species which build and lay their eggs in February and early March, as the Great Horned Owl, but it is not generally known that any of the common smaller birds thus occupy their summer homes.

MORRIS GIBBS, Kalamazoo, Mich.

Mockingbird in California.

I read the account of A. A. Jeffrey in the December OöLOGIST and find that the habits and nesting of the Mockingbird *Mimus polyglottos* differs very much in California from those described in the article of Mr. Jeffrey.

Here the Mockingbird remains

throughout the year. There were none seen here until about 1896. Then there appeared one pair in town. They nested and now the county is full at them.

It is noticeable that they stay very close to inhabited dwellings. They nest in April the first time and rear several broods in a season. The nest is built up of small weed sticks and lined with hair, cotton or wool. It measures some 5 to 6 inches across and is usually 2 inches deep. It is placed invariably near some habitation, sometimes in a pile of brush, sometimes in a dead tree, while again it may be found in a dense undergrowth or hedge.

When you approach the nest the male sits quietly by and watches. When within a few feet of the nest the female generally slides off the nest and retreats a few yards and perches. There she sits uttering a sort of rasping call while the nest is investigated: They never make any fuss until the nest is reached.

I have never taken a set, where incubation has commenced, of less than four eggs and usually five or six. The eggs vary greatly in size, shape and color. Some are almost round while others are long and pointed. There are bluish green spotted with reddish brown. Often they are spotted profusely but sometimes a set is found with few spots on the larger end.

The birds feed upon fruits, worms and insects. I have noticed them rob a nest of Warblers and eat the eggs. They also fight other birds.

The male does most of the singing. He perches on a housetop, fencepost or other convenient place and pours forth his song in clear distinct tones. He can imitate any sound he hears, domestic or wild. The bird may be heard singing in the night and I have heard them singing as late as midnight and 2 a. m. Their song is very pleasing and consists of very short imitations of all other birds, only a few notes of each

one's song being represented.

I should like to hear from the Mocker from other places in the U. S. This locality is 36"; or almost as far north as he goes.

R. LEE,
Tulare, Calif.

A Robin Tragedy.

Early one morning in April, 1897, while strolling along the street enjoying the exhilarating jubilant song of the Purple Finches, the activity of Bronzed Grackles flying back and forth over the tree tops with nest building material to various evergreen trees, and listening to the morning chorus of dozens of Robins, I found a Robin hanging about one foot below its nest. The nest was about ten feet up in an evergreen tree and near the end of the limb.

Upon examination I found that they had used a quantity of white thread ravelings as a finishing touch around the rim of the nest, and that several of these had become entangled in the joint of the Robin's tongue, so when in the act of flying from the nest it was suddenly brought to a stop and jerked below the nest where the poor bird hung by its tongue, dying a sad and painful death. I took the Robin with the nest and one egg. A few days later I had occasion to pass under the same tree and happening to look up I was rather surprised to see a Robin sitting on her nest which had been placed in the same spot as the first nest and she had even used some of the fatal ravelings in its structure, but this time no fatality occurred and in due time a family of Robins was added to the bird world.

C. F. STONE,
Branchport, N. Y.

Suggestions.

The army of enthusiastic young

workers in the field of Oölogy is steadily on the increase and while we extend a hearty welcome to new adherants we are still inclined to disapprove of all attempts to better establish method. For the benefit of advanced students, who have not participated in the joys of the exchange column, I will make so bold as to volunteer a few suggestions in accordance to my experience.

Eggs should be collected in sets. A set is the number of eggs found in any one nest when the bird has ceased laying or may be a selection from a "job lot" varying in number to suit purchaser or the second party in an exchange transaction. Was once offered a set of 14 eggs of the Catbird accompanied with the assurance of its being an unusual number. In reply I heartily agreed with the collector that such large sets of that species were very unusual and while I highly appreciated his generosity in offering to part with so great a rarity, I could not find it in my heart to take advantage of such noble sacrifice by accepting.

If you are an eastern collector prefix the word western to sets of the Bluebird and Robin you collect. This enables you to gladden the heart of some eastern Oölogist by affording him the opportunity to secure the rarer western varieties. Have known this to occur and why it should be done is, of course, an insoluble mystery when we reflect that the eastern variety is of much less value. Have also known of a set of Red-headed Woodpecker to be sent to California as such and later returned east as the California species.

Identification is of vital importance and should be influenced by the value of different species, when possible. For illustration we will assume that a set is found in a bush by the roadside and bears every indication of being that of Yellow Warbler but the eggs differ somewhat from the general run. You consult some work on birds and discover

er they fit description of Golden-winged Warbler and label them accordingly. Now, as you wish to dispose of them and spare a fellow collector the pain of suspicion, you simply shift location of nest on data to clump of ferns in woods and again referring to the book can easily ascertain its composition.

Blow your eggs through as large a hole as possible, especially if fresh. This enables you to feel inside with your finger and make sure the contents has been thoroughly removed.

In packing eggs for transportation line a box with cotton and dump them in. Do not forget the lining of cotton as otherwise the eggs will bump against the box and injure it. It is not advisable to carefully wrap each egg in a generous strip of cotton owing to the grave danger of shipment reaching destination without accident.

J. CLAIRE WOOD, Detroit, Mich.

Nesting Habits on the Black-throated Green Warbler.

The Warbler is quite common in this locality and arrives here the last of April and the first week in May. Its favorite resorts and nesting places are thick spruce and pine forests on the slope of a hill. The nest is usually placed on a fork of a coniferous tree generally a spruce or pine with thick foliage and well out on a limb within a few feet of the tip usually at no great height. My note book says from 6 to 20 ft. from the ground ten or twelve being height, in 1898 I had the good luck to find three nests with eggs of this Warbler May 26 No. 1, 5 fresh eggs, nest placed on a horizontal limb of a pine tree near an old wood road, nest made of pine twigs, strips of bark and grass, lined with hair and feathers covered on the outside with birch bark making it very conspicuous against the green foliage of the tree. May 28 No 2

4 eggs incubated about $\frac{1}{2}$. Nest placed on a fork of a horizontal limb of a spruce tree 20 ft. from the ground and well out on the limb, nest made of spruce twigs, strips of bark and grass lined with hair and feathers, this nest somewhat larger than the first. May 31, No 3, nest placed on a horizontal limb of a spruce tree, 11 ft. up and near the tip of the branch, nest made of spruce twigs, weed stems, strips of bark and grass lined with hair and feathers and contained 4 fresh eggs.

They migrate from here from the 1st to the 15th of Oct. I visited their breeding grounds after the breeding season in July and was surprised to not see any birds. Where they disappeared to I am at a loss to know.

A. H. MILLS, W. Rutland, Vermont.

Bird Notes from Maine.

Birds have been quite abundant here this winter, I have observed the following species:

Ruffed Grouse: that beautiful and valuable game bird is very abundant here; nearly every coniferous growth is a roosting place for several of these birds.

Downy Woodpecker: nearly every hard wood growth contains a pair of those interesting birds.

Blue Jay: more abundant near my home than for several winters past.

Amer. Goldfinch: have observed several quite large flocks of this species this winter.

Pine Grosbeak: this species has been very abundant; several pairs of these birds have been in our orchard trees nearly every day and are very tame.

White-breasted Nuthatch: Very abundant, several pairs have been observed in trees in our yard nearly every day this winter.

Chickadee: this interesting little bird is an abundant resident throughout the year.

White-winged Crossbills, Redpolls,

Pine Siskin and Song Sparrow have been seen in different parts of the state but have not observed any in this locality.

GUY H. BRIGGS, Livermore, Maine.

A Saw-whet Owl.

On Feb. 10, while I was walking through a small patch of bushy woods, with a few white pine and cedar trees distributed over it, I found a Saw-whet Owl asleep in a white pine tree, which I was much surprised to see.

As I was without a gun I could not shoot him and so I chased him all around among the evergreen trees. He was very tame and would not move until I threw something at him and when flying he went in circles, and he had a very wide wing expanse.

In the afternoon when I came back I found him still there and I shot him and had him mounted.

J. STANLEY HOWARD,
West Medford, Mass

A Unusual Nesting Site.

In July 1898 I found a nest of the Chimney Swift built on a perpendicular wall inside a carriage house, the birds going to and fro through a small hole in the side of the building. The nest was made of the usual material and contained four fresh eggs.

GUY H. BRIGGS, Livermore, Maine.

Errata.

Feb No. to hand I see there are two greivous errors in my note "Blue Jays at Play." "That is small for, etc.," should have been "*That is not small etc.*" Whilst "ponderous branches" should have been "*pendulous.*"

J. Alston Moffat,
London, Ont.

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THE OÖLOGIST.

A MONTHLY PUBLICATION DEVOTED TO
OOLOGY, ORNITHOLOGY AND TAXIDERMY.

VOL. XVII. NO. 4.

ALBION, N. Y., APRIL, 1900.

WHOLE No. 165

Wants, Exchanges, and For Sales.

Brief special announcements, "Wants," "Exchanges" "For Sales," inserted in this department for 25c per 25 words. Notices over 25 words, charged at the rate of one-half cent per each additional word. No notice inserted for less than 25c. Terms, cash with order.

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170	"	"	"	Sept. 1900
173	"	"	"	Dec. "
175	"	"	"	Feb., 1901
180	"	"	"	July, "

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WANTED:—Chapman's "Handbook, Birds of Eastern North America;" also Langille's "Our Birds in Their Haunts," Latest. Write lowest cash price. J. MERTON SWAIN, Woodfords, Maine.

WILL exchange 4x5 Photographs, places of interest in Philadelphia, Fairmount Park, etc., for Eggs, singles or sets. Snake, Turtle Eggs, etc. are my speciality. JOSEPH E. TYLER, 234 Church St., Philadelphia, Pa.

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WANTED:—Copies of the Auk, 1884-90 and of the Biblical Monthly Magazine (edited by Prof. Harper, Chicago) 1890-1899, for which I will give foreign and U. S. postage stamps in return. For every four copies of the Auk \$2.00 worth of stamps (Scott's 59th Catalogue prices) and a similar amount for every 12 copies of Biblical Monthly. I have thousands of duplicates used and unused in nice condition, which I will sell at 70 per cent. discount from Scott's prices. REV. A. T. GESNER, Grand Forks, N. D.

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My notice in the November OÖLOGIST advertising climbing irons brought a great many orders from all over the country. I regard the OÖLOGIST as the best advertising medium when one desires to reach the Naturalists of America. Chas. McGee, Leavenworth, Kas.

WANTED—To correspond with all interested in NEW YORK STATE Ornithology. DR. MARCUS S. FARR, State Museum, Albany, N. Y. 164

TO EXCHANGE:—Odd numbers of Auk, Nutt. Orn. Bull., O. and O., OÖLOGIST, and a score of other papers and periodicals, catalogues and books on fishes, reptiles, birds, &c. Younger members of my family are interested in philately and I will exchange these books, &c. for stamps. Write for particulars and state what you have, enclosing stamp for reply. MORRIS GIBBS, M. D., Kalamazoo, Mich.

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SIX 10 and 25c paper covered novels, and Standard works, 80 to 200 pages each, *prepaid*, 35c cash, or \$2. worth eggs at list. BENJAMIN, HOAG, Stephentown, New York.

HEAR YE! Hear Ye! Hear Ye! This is to certify that my advertisements in the OÖLOGIST have paid me better than have the combined ads. in most of the amateur and natural science papers. Ads. in the OÖLOGIST always bring returns, and it is safe to say that there is no paper having three times the circulation of this widespread periodical which can give equal satisfaction. MORRIS GIBBS, M. D., Kalamazoo, Mich.

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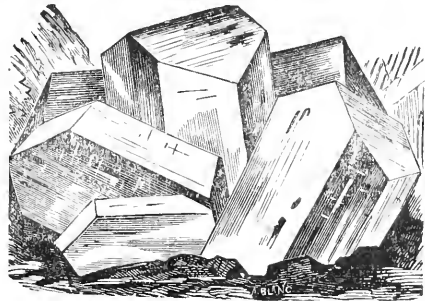
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BOOKS

I have thousands of volumes relating to Natural History. In case I've offered anything during the past year which you can use please favor me with list of wants and allow me to quote "SPECIAL" prices. *All must be sold.*

Your attention is particularly called to my Book Lists in the June-July and October (pages 142-143) 1899 OÖLOGISTS.

If I've anything left which you want or can use I would be pleased to be informed of the fact and will endeavor to see that the matter of "price" will not be a barrier in making a transfer.

Frank H. Lattin,

Publisher of OÖLOGIST, Albion, N. Y.

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You will need Books, Supplies, etc. Send stamp for list of Supplies, Birds Eggs, Minerals, Shells, etc. Stamp list just out. A copy of my "Directions for Collecting Eggs" free with Oologist's Supply list. E. H. SHORT, Albion, N. Y.

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BIRD-LORE

For February, the first number of Volume II, contains a full-page portrait of the late Elliott Coues, a list of over 50 prominent ornithologists, residing throughout the United States and Canada who have consented to aid bird students by responding to their requests for information and advice, and, among others, the following articles: "Concerning Birds' Tongues," (12 illustrations) by F. A. Lucas; "The Economic Value of Gulls," (illustrated) by Frank M. Chapman; "Bird Study at Oberlin College," by Lynds Jones; "Every-day Study of Birds for Busy People, including a method of Recording Notes," by W. H. C. Pynchon; "The Season's Flight of Crossbills," (illustrated) from notes by William Brewster, J. N. Clark, and others; "The Blue-winged Warbler in Southern New York in January," by Elizabeth G. Britton; "Where the Grebes' Breasts Come from," by Vernon Bailey.

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THE OÖLOGIST.

VOL. XVII. NO. 4.

ALBION, N. Y., APRIL, 1900.

WHOLE NO. 165

THE OÖLOGIST.

A Monthly Publication Devoted to

OÖLOGY, ORNITHOLOGY AND
TAXIDERMY.

FRANK H. LATTIN, Editor and Publisher,
ALBION, N. Y.

Correspondence and items of interest to the student of Birds, their Nests and Eggs, solicited from all.

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Nesting Materials.

Continued from last month.

The Snipes and Sandpipers make shiftless nests and often make no preparations for their eggs beyond the selection of a slight depression in the

field or marsh. The Plovers are still more negligent, and rarely make any preparation beyond the arrangement of a few little gravel stones about the prospective place of deposition, or perhaps a few scratches in or about a slight hollow. But in the case of these gravel stones, the watchful birds are quite jealous, and will often rearrange the misplaced ornaments if disarranged by the interlopers. The same habit has been noticed in the case of the Nighthawks who often build among gravel and who undoubtedly select these situations for the protective appearance of the surroundings. The speckled eggs of both the Nighthawk as well as those of the Plovers and Sandpipers, make it exceedingly difficult to discover the location. Where the Snipes and Sandpipers build nests the structures are poorly made of grass and roots, and at times a few twigs. In those birds which carefully tend their young in the nest for a period of from ten days to nearly three weeks as is the case with nearly all of the perching birds, it is essential that the nest should be quite durable. But with the precocious birds, as the Grouse and Quail, Snipe and Plovers it is not necessary to have a stable nest, as the young can and do run about the next day after they emerge from the shells. As these birds never remain in the nest or place where hatched more than a day or two, but wander about, and often to quite a distance following the old bird, it would be a useless waste of time to construct a strong nest. That the birds reason this out I have not a doubt, and as an instance in point would cite the observations that we made on an island in the Indian river, Florida, where a large rookery of Pelicans was quartered. Many nests

were built in the mangrove trees while much the larger number were found upon the sand at a very few inches elevation above the tide. Now while the nests on the ground were mainly constructed of coarse grass and rushes, resembling straw, and were poorly built, the nests in the trees were found to be well built, being mainly constructed of heavy sticks to withstand the wear and tear of time and storm. If this is not an instance of reasoning in birds then there is no such a qualification in animal life in any of its many and varied degrees.

The Cuckoos construct poor nests; in many instances mere platforms of twigs much like the nest of the Passenger Pigeon, but usually provided with some lining, often the blossoms of the beech or willow. On this nearly level top are laid the eggs which are on the verge of ruin most of the time when the old bird is away.

The Whippoorwill is another peculiar nester who lays its eggs on the bare dry leaves, and without a sign of preparation. It is quite possible, yes and even probable (for Audubon says it is so) that the Whippoorwill removes its eggs from place to place when necessary. I have seen an instance in the case of the nearly allied Nighthawk where the eggs were removed by some means, and I believe through the bird's agency. If this power exists, why should the birds build a nest?

Among the specialists in choice, the Black-capped Chickadee is a remarkable instance of selection of the fur and hair of animals. This energetic little fellow will look up some small dead mammal and pick off the delicate fur for its nest in the hole in the stump. Perfectly clean fur is chosen, and the result is a very soft, warm nest in the cavity. The fur, which is almost invariably mixed with dried mosses, shreds of which are still green, and also downy substances from catkins containing reddish bunch-

es; all making a very pleasing combination. On this bed in the cavity are laid the six to eight delicate white eggs spotted with reddish. I have met with but one nest unprovided with fur, and this occurred in the village where the little Titmouse had taken up its unusual spring abode. Rabbits or mouse's fur is generally selected, but there are nearly a dozen small mammals to select from, and I have seen the long hairs from the coon and woodchuck appropriated by these little birds. Nothing lacking in the artistic, or wanting in comfort is ever chosen by these little inhabitants of cavities. It is a pleasure to watch the nesting habits of the Titmouse from the first peck in the decayed stump to the time that the young leave their cavity home and follow their lively parents about the grove.

Another cavity nest builder, and one belonging to the same family, is the White-breasted Nuthatch. This little up-side-down bird as I call it, in allusion to a common position in movements, selects a cavity ready made when opportunity offers, but can dig out a burrow in the decayed wood if necessary. It follows that holes are selected of all sizes, and these cavities are filled after the manner of the imported Sparrow with all kinds of rubbish. There was one nest that I examined which was placed in a space between the lath and siding of a house in the village, and which was reached by a knot-hole. At least a peck of rubbish was taken through this hole to fill the cavity, and the mass comprised most everything that could be found in a door yard excepting tin cans and stones. The only other native birds which I have found to fill large cavities in this manner are the House Wren and that curious nest builder the Great Crested Flycatcher.

Among the Warblers we meet with some curious and artistic designs in nest construction. The nest of the Yellow Warbler, so wisely yet curiously

re-built to prevent the encroachments of the Cowbird. The Ovenbird, that often burrows beneath the dead leaves and constructs its dome-like home so beautifully concealed that it is only discovered by accident. One of the most artistic of nests is the home of the Hooded Warbler. A rare nester, but I have had the good fortune to meet with over a dozen of these fairy homes, and all were composed in the body of bleached leaves of the sugar maple, giving a pleasing appearance to the structure.

MORRIS GIBBS, M. D.

Kalamazoo, Mich.

To be continued.

Robins' Roosts Again.

Your article on Robin's Roosts in the February issue leads me to speak further on the subject. It is unusual to meet with large roosts in the Great Lake Region, and in my experience I have known of a flock of these birds which exceeded one hundred. But in the south the Migratory Thrush is to be found in thousands in the migrations; especially in February and early March.

One season about the middle of February these cheerful birds were observed in immense flocks on the eastern coast of Florida, in Brevard county and below the 28th. parallel. Their route of migration was probably via the Bahamas as they appeared with a rush and had not been recorded that year '94 in the State to my knowledge. One morning thousands were to be seen all about the place. They were in live oaks, palmettoes and even in the mangroves which line the shores of that long lagoon, the Indian River. But most of the birds kept upon the ground where vast flocks were to be seen feeding at all times of the day. Plenty of cheerful chirps and other small talk were indulged in by the immigrants from the Bahamas, but there was not a full song to be heard from any one of the flock. At night the Robins roosted all about

us and hundreds must have selected the mangroves for a lodging house as they were seen skipping about in the almost impenetrable tangle just at dusk, while later their cheeps could be occasionally heard as they composed themselves to rest. It is generally supposed that Robins and other thrushes and in fact all of the perchers migrate at night, and this has been proven satisfactorily in most cases, birds are very leisurely in their migratory movements and frequently remain in a locality for several days in spring as well as autumn.

The large majority of these birds remained at that location for two days, while the last of the flock was seen as late as five days after the first appearance. Not another Robin was seen that season, and I watched carefully until late April. MORRIS GIBBS.

John A Dakin.

Mr. John A. Dakin an associate member of the American Ornithologists Union, died after an illness of six days of spasmodic colic, at his home in Syracuse, N. Y. Feb. 21, 1900, at the age of 48 years. Mr. Dakin was born at Hillsdale, Columbia Co., N. Y. in 1852, but when a small boy moved to Tully, N. Y. with his parents, where he received his first education in one of the district schools. When he was hardly old enough to roam over the hills and through wood and swamp his love for birds began to develop, as it was his delight, day after day, to watch and listen to the Bobolinks and other birds as they flitted and sung by the roadside as he passed on his way to school.

Above the window at his home a pair of little wrens had made their nest in a box, and it was his delight to watch and study these little creatures that he might learn their habits, and they were called by the family, John's birds.

When he was scarcely eight years old he had innumerable birds' nests, and

it pleased him to show them to other boys, but at this age he was never known to rob a nest of its eggs.

He first became interested in stuffed birds from a local Taxidermist and it was his ambition to learn how to do it, and he said if he ever learned, he was going to mount a Scarlet Tanager, Bluebird, Golden Oriole, and a Robin as he thought then, they were the most beautiful birds in the world.

□ But Mr. Dakin almost reached the age of manhood before he learned how to make a bird skin; having met Mr. Albert Brainard, now of Red Lands, Cal., who gave him his first instructions and he immediately became enthusiastic in a collection of local birds.

It was his habit to rise early every morning and roam about the hillsides and through what is now known as Barney's Swamp, and along the shores of Tully Lake in pursuit of a greater knowledge of birds. He accumulated a vast amount of information concerning the local birds and collected specimens of most of the species known to occur in Onondaga Co.

In 1882 he went to Florida and hunted through the Everglades and along the Oklawaha River, collecting information and specimens of the birds in that region. While there he also gave a great deal of attention to the Heronries which were then innumerable on the brushy islands and shores of White Lake.

After being in Florida four years he came north and fixed his home in Syracuse.

In 1888 he again returned to Florida and took unto himself a wife after which he returned to Syracuse and engaged in business.

In 1893 he took up the study and collection of Lepidoptera which he pursued with equal enthusiasm with birds, and when he died he possessed one of the largest collection of N. A. Lepidoptera in this section.

Mr. Dakin had a competent knowledge in other branches of natural history but devoted most of his time to birds and later to insects.

Mr. Dakin was a charter member and founder of the Onondaga Academy of Science and contributed many valuable papers on the birds and insects of Onondaga Co. He was a great advocate of bird protection and read many papers before schools and other societies and has done a noble work in this cause. He was gifted with a graceful pen and his simplicity of description made his writing peculiarly attractive.

It is impossible to speak of him in too high terms as a friend and as a man he possessed a singularly attractive personality which endeared him to all, and his honesty, modesty and lofty principles won for him universal esteem.

By his death the Union and scientific world loses a valuable and able contributor to Natural Science, and his large circle of friends mourn that they have lost a true and very dear friend who from his boyhood days has been a lover and devotee to Natural History.

A. W. PERRIOR.

The Arctic Three-toed Woodpecker in Western New York.

BY CORNELIUS F. POSSON, MEDINA, N. Y.

The Arctic Three-toed Woodpecker, (*Picoides arcticus*) is not often observed in localities so far removed from the arctics as is this.

A skin just recently received from Murray, this county, and the recollection of another specimen also taken in this county some seventeen or eighteen years ago, suggest to me that a brief sketch upon this rare Woodpecker and its occurrence here might not be inappropriate.

We have in the Eastern United States two species of Three-toed Woodpeckers, the Arctic and the American, both

inhabitants of the north and lovers of cold weather. Contrary to what might be expected from their names, the Arctic is not quite as northerly as the American.

These Woodpeckers differ from others in having yellow on the head of the male instead of the usual red; and in having but three toes instead of four. Very strange indeed is this pedal alteration. We say that never is there anything superfluous in nature,—that everything has some office, even though it may be but for ornament. But how about four toes for a Woodpecker? Nearly all Woodpeckers have them and yet here is a species with but three, and in all his journeys up and down the tree-trunks, he is just as nimble, spry and agile as the others. Certainly here is something superfluous in nature at least. Perhaps it is the exception that proves the rule.

The Arctic Three-toed Woodpecker is eight to nine inches long; wing $4\frac{1}{2}$ to 5; tail $3\frac{1}{2}$ to 4. Back, uniform black; sides of head, striped; sides of body, barred with black and white; under parts, otherwise white; quills with white spots, paired; tail feathers unbarred, the outer white, the central black. In the male the crown has a square patch of yellow about the size of a ten cent piece. In the female, this spot is wanting, the head being a glossy black uniformly with the rest of the upper parts.

Its habitat is Northern North America, from the Arctic Regions south to the southern border of Canada. The food of these northern Woodpeckers is of a nature calculated to render them the most beneficial, economically considered, of all the Woodpeckers. The few stomachs examined by the U. S. Department of Agriculture showed 83 per cent. of their food to be of animal matter, while only 17 per cent. was vegetable. Of the 83 per cent. of animal matter, 63 per cent. consisted of

wood-boring beetles; 11 per cent. of Lepidopterous larvæ (caterpillars), probably also wood-borers; and 9 per cent. of adult beetles, ants and other Hymenopterous insects. Thus does this energetic bird with but three toes do much towards the preservation of the stately pines in the Northland where he dwells.

So far as I know there are no records for the occurrence of this northern Woodpecker in Western New York excepting the two instances here related by myself.

The first of these instances is of a male specimen taken about October 15, 1882, on the bank of Oak Orchard Creek near Two Bridges (Carlton) by Mr. Andrew Jewett of Albion. It was hammering and feeding in the dead top of a pine tree. If visits are to be expected from this northern bird, we should certainly look for them in the midst of the cold of the winter, and so it is somewhat remarkable that this bird should have been taken here so early in the fall. But there is no chance for any mis-identification in this case, even though this specimen has now been lost trace of, for the yellow crown-patch and the three toes, and the uniformly black back, are features which even the un-technical observer would use in diagnosis, and of these three features Mr. Jewett has a vivid recollection.

The second specimen referred to was only recently taken and is now in my collection through the kindness of Mr. F. A. Macomber of Murray, this county, who secured it near that place on the 23d of February last. It was on the banks of Sandy Creek near what is called Arnold's Pond. When first observed it was in a hemlock, but soon flew out and alighted upon a beech near its base. Mr. Macomber, recognizing it as something out of the ordinary, at once shot it, and mailed the skin to me, same now being in my collection. It is a female, the crown-

patch, of course, wanting; the entire upper parts being uniformly black from the bill.

The specimen exhibits the following measurement: Length, 9.25; wing, 5; tail, 3; bill, 1.12; tarsus, about .75. It was on February 23d this bird was taken. In the days immediately following a sudden cold snap with snow and zero weather followed. Evidently this bird moved southward just in advance of the cold wave.

And so it is that our little county of Orleans claims record for the only two occurrences, so far as known, of this rare Woodpecker in Western New York. If there are other occurrences, I have been unable by perusing all the ornithological publications of the country for several years back, to find any record of them.

When shall we begin to say that there is nothing left to learn about birds, or that the chances are small for securing anything rare any more; or that winter has no advantages? Indeed the winter offers great opportunities to the student of birds. Only last week (March 8th) when the landscape was everywhere covered with a thick mantle of white a company of six White-winged Crossbills (*Loxia leucoptera*) visited the pine trees in the door yard next adjoining my own, feeding upon the cones. Males they were in bright plumage, and very interesting because very rare.

Such occurrences as these make the enthusiastic bird-lover to exclaim in the words of the poet:

"Winter! I love thee
All unlovely as thou seem'st
And dreaded as thou art."

The Nesting of the Ruffed Grouse Within City Limits.

In the early spring of '98 it was my good fortune to discover a nest of the Ruffed Grouse. On May 8th. I was walking through a small patch of woods

looking for crows' nests. I happened to look under a small pine tree by the side of the path and much to my surprise I saw a female Ruffed Grouse sitting there. Her plumage blended so perfectly with the dead leaves that it was purely by chance that I noticed her. She evidently thought her disguise was perfect as she did not move a feather. I stood looking at her for fully three minutes until my curiosity got the better of me. Kneeling down beside her I gently touched her tail feathers and off she went like a shot. I was interested to note that as she did so she brushed some dead leaves over the eggs with her wings and feet. So successfully was this done that the eggs were almost wholly covered. Carefully picking the leaves off I was delighted to find a set of eleven eggs. These afterwards proved to be very slightly incubated. After the female had been flushed from the nest, I did not again catch a glimpse of her. The eggs were laid in a slight hollow in the ground lined with dead leaves and a few feathers. It was interesting to note that this nest was within 50 yards of a road and within a few yards of the boundary line marking the limits of the city of Boston.

ABBOT PETERSON,
Jamaica Plain, Boston.

Least Bitterns Observed in Pennsylvania.

While camping on Ten Mile Creek near Hacken's Station, Washington Co., Pa., with two friends, I found the Least Bittern in small numbers. On July 5, 1899 we were at the creek, I was for turtles. The other two had gone up a smaller stream. I heard them shooting and when they had returned they presented me a mangled Least Bittern. One shot from a 32 20 Marlin rifle did the work. They had flushed it from the bank of the stream (in which the water was but a few inches deep) and it had flown about fifty yards and lit on a

fence post, then they shot it with a rifle (the shotgun being at camp.) The same day I saw another flying through the air about fifty feet high. While we were there we saw several more. I knew the bird at sight for I have found them breeding in Northwestern Missouri. I have a set in my collection which I collected in Atchinson Co. Mo., June 27, 1898. In Warren's "Birds of Pennsylvania," he says: "The Least Bittern I have found in this State only as a rather rare visitor during the spring and fall migrations. This species is sometimes, though rarely, observed in Pennsylvania during the breeding season." It is said to breed occasionally in Crawford and Erie counties. It is my opinion that they breed here. I intend to visit this locality the coming season and will try and find out if it breeds here.

E. R. Forrest,
Washington, Pa.

An Early Sora.

We have had in Buffalo and vicinity a very heavy snow fall, during last week and March 5th, a very heavy wind blew from southerly direction. A young man living in one of our residence streets, going into the yard, saw a queer looking bird struggling in the snow bank. He experienced no trouble in catching it and bringing it into the house. The next day he brought it to me for identification. To my surprise it proved to be a Sora or Carolina Rail, which usually make their appearance from the south in this vicinity in the middle of April. As these swamp birds travel very slow during their migration and never fly very high, the birds must have been thrown out of their course by the prevailing gale. It died the same evening and by dissecting it I found it to be a mere akeleton, with no food of any kind in the body.

Ed. Reinecke,
Buffalo, N. Y.

Our Audubon Class.

Our "Bird Class" called the "Alpha," began its existence in the spring of 1899 and with a membership of about a score. At the present date we have twice that number while the membership is still growing. It is composed of about an equal number of boys and girls and it must be said that the girls are the most enthusiastic workers both in the field and at the meetings. The boys are equally anxious to get in the woods on a trip but they seem to lack in a large part the love for actual study, and prefer ball and boating to actual observation. Perhaps you may wish to hear of our society from my point of view and of the work that we are doing and expect to accomplish the coming season.

Our chief patrons are Mr. and Mrs. C. G. Kleinstuck who live at about a mile and a half from the city, and whose residence we reach by the electric cars running by their commodious house and grounds. This kind couple takes special delight in advancing the cause of the birds and gives time and influence in the furtherance of this worthy project which is to promote the welfare of the bird world, as well as to cause a love for the study among the members of the town and country.

One of the chief attractions in the grounds at "Saxonia" is a large log cabin, built in the Adirondac style, and of huge size. There is an immense fire-place at one end which is capable of taking in great logs and adds one of the many charms to the pleasing interior. The walls are decorated with ancient arms, and the discarded blunderbuss and pepperbox as well as the modern mauser and Cuban machete are arranged with other curiosities upon the well matched logs or capacious mantle. Many fur rugs are on the polished floor, giving an incongruous but not unpleasant appearance to the cabin

of the wilds built in civilized quarters, and when decorative art joins hands with the wilder aspects of the primitive methods of the settlers we are royally entertained in this artistic cabin but our meetings are mainly held weekly in the city, and usually on Thursday afternoon and directly after school hours.

At one meeting we had a contest as to who could name the most species of birds from the pictures. At other meetings we have had bird skins to examine and at all of our meets we have original papers while the older members speak to us on various topics connected with bird life. During the season we have made several trips into the country as a party, while many small parties or pairs of students made many trips in various directions in search of bird notes. In the season of '99 we recorded (76) species of birds in this neighborhood, but of course this list does not include many of the water and shore birds, which are rather difficult to observe, at least by the majority of our class. The smaller summer residents were carefully noted and nearly all of the students were able to name a bird on sight, while many could tell a species by flight, and again, some could name a songster from its notes in nearly every case.

Our bird class has been a great pleasure and we shall continue our investigations the coming season, with the prospect of increasing our knowledge and our membership as well.

The suggestion is made that all bird-lovers take up the work of bird protection in their neighborhood and form societies for the study of our feathered friends. In addition to the economic value to be gained by protecting the beautiful and useful birds of our land, we shall also have the pleasure of familiarizing ourselves with the songs and habits of our little summer neighbors. We can watch their ways with-

out destroying them, and all readers must know that our birds need protection, for they are too often needlessly destroyed. I am a believer in collecting specimens, but there are limits, and it is hoped every boy and girl will deal fairly with the graceful pleasing birds of the fields and woodlands. Do not let greed make you forgetful of the rights of these "favorites of creation" as they have been so beautifully called. It is far from necessary to shoot so many birds and gather so many eggs in order to make an impression on a naturalist. Your actual worth as an observer will be far more appreciated if you study their habits and take notes in your field book. A well filled note book is far more entertaining than a collection of eggs and skins of which the gatherer knows next to nothing.

Now do not think that I am trying to diminish the true worth of the legitimate collector. On the contrary I am in favor of collecting but there are limits, and I am speaking in favor of the birds. Be reasonable fellow collectors and make it a point to spend more time with your note book and less with your skinning knives and blow pipes.

KATHRYNE GIBBS,
Kalamazoo, Mich.

A Tame Shrike.

About the 1st. of February while out walking I noticed a Loggerhead Shrike, (*Lanius ludovicianus*) sitting on a tree in the yard. I said "Halloo Butchie" and great was my surprise to see it hop around and look at me, then I knew it was the same old bird I used to feed from my hands. I hunted around and collected nine crickets, eight of which he took from my hand. I think it is very strange that he should remember this for he had not been fed before for eight or ten months. This bird had evidently heard that the "early bird catches the worm" for he was seen several times with nest material in his bill, February 10th. This bird had never been tamed.

DONALD B. OHLINGER,
Winter Haven, Fla.

An Easter Offer.



To any person who will send me \$1.00 in acceptance of the **\$2.75 for \$1.00** offer which I make in March OÖLOGIST, and will enclose 10 cents additional to help cover mailing expenses, I will send *gratis and prepaid*,

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WHOLE NO. 166

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C. B. VANDERCOOK, Odessa, Ill., pays 50c per hundred cash for Star, Horse, &c. Cross Bow, Good Luck, Drummond's Natural Leaf J. T. tobacco tags., Those painted on under side. Offer expires November 1st. 167

EGGS for Sale. A. O. U. Nos. Sets of 7 1-2, \$1.50; 11 1-2, 75c; 64 1-3, 40c; 65 1-3, 40c; 79 1-1, 18c; 86 2-1, 20c; 104 1-1, 20c; 105 1-1, \$1.; 106 2-1, 5c; 114 1-2, \$1.75; 115 1-2, \$1.50; 190 1-4, \$1.; 224 1-4, \$1.; 228 1-3, \$1.50; 294 1-20, \$1.; 325 1-2, 60c; 333 3-4, 25c; 337 2-2, 40c; 337b 5-2, 40c; 342 1-3, 50c; 375a 1-3, \$1.15; 375a 1-2, 75c; 394a 1-6, \$1.; 397 2-3, 1-4, 1-5, 35c per egg. All sets with data first class and prepaid. CHAS. S. THOMPSON, Paso Robles, California.

GLASS EYES—Lot No. 1 contains one pair each Nos. 8 and 15 yellow, No. 9 hazel, No. 18 brown (worth 44c), all prepaid 24c. Lot No. 2 contains one pair each No. 19 brown style two (veined) for Bear and Nos. 23 and 24 style four (veined, long pupil and cornered) for Deer (lot worth \$1.31). All prepaid, only 76cts. FRANK H. LATTIN, Albion, N. Y.

NOTICE.—Owing to lack of specimens and rush of other business I shall be unable to make more exchanges until fall. GUY BRIGGS, Livermore, Maine.

I HAVE a good many back numbers of magazines (some complete files), such as Osprey, Museum, OÖLOGIST, Nidologist, Popular Science, Oregon Naturalist, etc. Will exchange for books or any good curios. Send for list if interested. W. H. HILLER, 147 W. 23d St., Los Angeles, Calif.

"SNAPS" for TAXIDERMISTS ET. AL:—Chain and Hooks (25c), 16c; 7in Stuffers, spring handle (1.25), 80c; Scissor-handle Stuffers, 2in. (\$1.75), 1.05; Scissor-handle Stuffer, 15in. (\$2.50) \$1.60; Bone Cutters, extra fine and heavy, (\$2.50) \$1.60; 38 cal. Wad Cutter, (40c) 22c; Pinning Forceps for Insects (\$1.25) 78c; Botanical Collecting Can with shoulder strap, size 12x7½x3½ in. (\$1.50) \$1.10; Tenaculum or Dissecting Hook, folding in handle (\$1) 28c. All prepaid at prices quoted, regular prices in (). FRANK H. LATTIN, Albion, N. Y.

PARTIES wishing a few fresh skins of Manitoba Birds, Downy young, choice sets of eggs, with or without nests. Send in your wants to CHRIS P. FORGE, Taxidermist and Collector, Carman, Manitoba.

EXCHANGE:—For fresh unblown Wild Goose Eggs, Birds Eggs in singles or specimens, 1 Colt's Rifle, 1857, 1 Colt's Revolver, N. S. N. 1835, in good condition. GEO. P. ANDERSON, Box 27, Dannebrog, Neb. 170

WANTED.—Will trade books of all kinds for good matched pairs of Ivory Elks teeth or single teeth; also collections of U. S. stamps bought for cash. Address, HALL N. JACKSON, 36 W. 6th St., Cincinnati, O. 170

HAVE YOU any well mounted Butterflies or showy insects to exchange for eggs this season? Send list. W. H. HILLER, 147 W. 23d St., Los Angeles, Calif.

FOR SALE.—About one doz. Moose feet cut at hock and knee. Make nice fancy table or stool, 50c each; Golden Eagle, skin fresh, \$5; Rough-legged Hawk, \$1.50; Saw-Whet Owl, \$1. These are snaps. CHRIS P. FORGE, Carman, Man.

FIELD or MARINE GLASS:—New, worth \$10, extension hood, case and shoulder strap, "Jumelle" make. Will send prepaid for only \$5.00. FRANK H. LATTIN, Albion, N. Y.

WANTED.—The 2nd and 4th annual Report of the Bureau of Ethnology. Will pay cash if cheap. J. S. ALLWOOD, Becla Works, N. Y.

AS SOON as the present collecting season is over I will have a number of Calif. sets to exchange for sets or singles of common showy eggs. Desire especially sea birds. W. H. HILLER, 147 W. 23d St. Los Angeles, Cal.

FOR EXCHANGE.—Good Student's lamp for eggs in sets, pairs, or singles. Also will accept Indian relics, curios, etc. Be quick. C. A. WHITE, Salineville Ohio.

WANTED:—A fresh skin of male Green-wing Teal. Offer \$3 worth of sets; also have sets to exchange. W. A. MEAD, Carmel, N. Y.

WANTED.—Chapman's Birds of Eastern North America. Write stating conditions and lowest cash price. GUY H. BRIGGS, Livermore, Maine.

CODDINGTON MAGNIFIER (Miners' glass), diameter ¾in, cost \$1.50, prepaid 95cts; also a 3 lens pocket magnifier in rubber case, only 60c, prepaid. FRANK H. LATTIN, Albion, N. Y.

INDIAN Relics, bird eggs, minerals, old books, etc. Address, ASHLAND LIBRARY MUSEUM, Ashland, Ohio.

FOR SALE:—Clutches of European species, White Gryfalcon, Gryfalcon, Merlin, Green Sandpiper, Greenshank, Golden Eagle, Gray Sea Eagle, Kestrel, Sparrow Hawk, Honey Buzzard, Peregrine Falcon, Hobby Egyptian Vulture e. Apply. GORTON, 2 Upper Gloucester St., Pendleton, England. 171

HEAR YE! Hear Ye! Hear Ye! This is to certify that my advertisements in the OÖLOGIST have paid me better than have the combined ads. in most of the amateur and natural science papers. Ads. in the OÖLOGIST always bring returns, and it is safe to say that there is no paper having three times the circulation of this widespread periodical which can give equal satisfaction. MORRIS GIBBS, M. D., Kalamazoo, Mich.

WANTED:—Skeletons and Skulls, all kinds, in rough and mounted, Bird and Mammal Skins, Reptiles and Batrachians in alcohol or formalin. Desire correspondents in all parts of United States, Mexico and Canada. Back numbers of papers on Natural History and scientific books wanted. Offer in exchange fifty species finely prepared Invertebrates in formalin, eastern bird skins, etc. Correspondence solicited. F. P. DROWNE, 20 Benefit St., Providence, R. I.

INSECT PINS:—150 best assorted and 3 sheets 3x4½-16 inch cork. All prepaid, only 20c. FRANK H. LATTIN, Albion, N. Y.

U. S. WAR CENTS and REBELLION TOKENS, issued 1861-65, same size as U. S. cent now in use, bearing peculiar designs, "Union Forever," "Not One Cent for Tribute," etc., etc. Some with merchant's names. Becoming rare. Will make neat pocket pieces. Boys, you can dispose of these old and curious war cents to your friends at a good profit. Supply limited. While they last will send one by mail postpaid for only 10c; 3 (each one different) for 25 cts. Stamps taken. O. J. SWANDER, Kenton, Hardin Co., Ohio. 171

FOR EXCHANGE.—A. O. U. No's. 16, 127, 194, 155, 293, 360a, 373i, 376, 375d, 381, 407, 429, 430, 431, 433, 434, 426, 460, 462, 466, 471, 475, 481b, 482, 486, 487, 505a, 592, 620, 633a, 683a, 707a, 708, 710, 717b, 721a, 725a, 743a, 751a. Will exchange these for desirable sets of other localities. I especially wish to exchange series for series. Many common ones wanted. Will also sell sets of 3-127 at \$1.00 per set and 16 80-1 at 50c per egg. These are part of my private collection and especially prepared. W. LEE CHAMBERS, Santa Monica, Cal.

SNAPS.

Offer No. 1 for Taxidermists.

1 Scalpel.....	\$ 50
1 pair Stuffers, 10in.....	1 60
1 pair 5½in. Spring Forceps.....	30
1 pair 5½in. Pliers.....	40
1 pair 3in. Wire Cutters.....	35
1 Bone Stone.....	25
1 Poison Brush.....	12
1 pound Best Preservative.....	20
1 Bunch Wire, 75 feet.....	15
11 pairs Glass Eyes, assorted sizes.....	60
1 Skin Needle.....	08
1 set Chain and Hooks.....	20
1 bunch Skin Tags.....	10
1 bunch Artificial Leaves.....	10
Total.....	\$4 95

This lot which contains everything necessary in making Skins or Mounting Birds, will be shipped by express F. O. B. for only \$3.00, or without the 10in. stuffers for only \$2.15. Prepaid price given on application.

Offer No. 2 for Oölogists.

3 Drills, assorted sizes.....	\$ 33
1 Blower, plated.....	20
1 best Embryo Set, handle and 3 hooks.....	75
1 pair Tweezers.....	25
1 Syringe.....	12
6 Checking Lists.....	10
1 Caliper Rule.....	25
100 Data's.....	20
1 "Directions for Collecting".....	05
Total.....	\$3.25

This entire lot will be sent postpaid for only \$1.28.

These are samples of the offers I am making to reduce stock before removing to Rochester, N. Y. soon after June 1st. Send stamp for complete list if you are interested.

ERNEST H. SHORT, Albion, N. Y.

What Did I Do?

I sent H. W. KERR, Publisher of the NATURALIST, (Farm) and FANCIERS REVIEW \$1.00 for FIVE YEARS subscription and FIVE 25 word Exchange Notices and I recommend it to YOU. Its Natural History Department edited by Isador S. Trostler of Omaha, Neb. is in need of your Attention, not to say but what the the Belgian Hare, Poultry, Pigeon and Pet Stock Departments are all leaders.

July 1st this offer expires and subscription advanced to 50c per year. Sample copy free. Ad. Rates based on actual issue. Address,

H. W. KERR, Publr., Blencoe, Iowa.

BOOKS

I have thousands of volumes relating to Natural History. In case I've offered anything during the past year which you can use please favor me with list of wants and allow me to quote 'SPECIAL' prices. *All must be sold.*

Your attention is particularly called to my Book Lists in the June-July and October (pages 142-143) 1899 OöLOGISTS.

If I've anything left which you want or can use I would be pleased to be informed of the fact and will endeavor to see that the matter of "price" will not be a barrier in making a transfer.

Frank H. Lattin,

Publisher of OöLOGIST, Albion, N. Y.

JAMES P. BABBITT,

Wholesale and Retail Dealer in
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Fine Imported Glass Eyes a Specialty.

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FOR SALE OR EXCHANGE:—One fine silver BEAT cornet, cost \$37.50. Will sell for cash or exchange for FINE ANCIENT INDIAN RELICS. Cornet has a shank and Cattachment. Address C. H. MAUCK, Appleton City, Mo.

Have you tried my process of Rapid Taxidermy?

If not you will be gratified by a big surprise. There is money to be made by the preservation of specimens for the market or the school, parlor, office and den. Any boy, girl or sportsman may learn this method at the first attempt and decorate the trophies and birds of the neighborhood. The cost is next to nothing, and when several go in and work together, there is no cost. You may make money in any town or the country.

On receipt of \$1.00 cash or stamps I will send the complete printed instructions to mount Birds, Mammals, Heads, etc. and one pound of the Preservative, ready prepared for the work; together with complete directions for dressing skins with the hair on, for rugs, robes and hangings, and in addition I will make the extra inducement of offering the formula for making the Preservative Compound, with the privilege of selling the same.

The process will be exchanged for \$3.00 worth of stamps, or for other exchange. What have you to offer? Address

MORRIS GIBBS, M. D., Kalamazoo, Mich.

Special Collections of BIRDS' EGGS

At Unheard of Prices to Close Out.

All specimens are first class, side-blown, true to name. Safe delivery guaranteed.

Collection No 1 Contains:

Wood Ibis, Great Blue Heron, Snowy Heron, Black-crowned Night Heron, Green Heron, American Coot, Lapwing, Killdeer, Bob-white, Florida Burrowing Owl, Flicker, American Crow, Starling, Red-winged Blackbird, Tricolored Blackbird, Orchard Oriole, Purple Grackle, Boat-tailed Grackle, House Finch, American Goldfinch, Gray-tailed Cardinal, Yellow Warbler, Yellow-breasted Chat, Mockbird, Catbird, Brown Thrasher, Wood Thrush, American Robin, Ringed Pheasant.

Twenty-nine specimens, one each of the above species, worth \$5.00. My price only \$1.25 PREPAID.

Collection No. 2 Contains:

Murre, Razor-billed Auk, White-faced Glossy Ibis, Louisiana Heron, Little Blue Heron, Whimbrel, Black-billed Cuckoo, Belted Kingfisher, Scissor-tailed Flycatcher, Kingbird, Phebe, Mexican Horned Lark, Fish Crow, Meadowlark, Arkansas Goldfinch, Sharp-tailed Sparrow, Indigo Bunting, California Shrike, Red-eyed Vireo, Chestnut-sided Warbler, American Redstart, House Wren, Chickadee.

Twenty-three species, one specimen of each of the above, worth \$1.92. My price only \$1.35 prepaid.

Collection No. 3 Contains:

Pied-billed Grebe, Western Gull, Arctic Tern, Shoveller, Northern Eider, Scoter, Curlew, Black Vulture, Swainson's Hawk, American Sparrow Hawk, Burrowing Owl, Road-runner, Yellow-billed Cuckoo, Chuck-wills-widow, Florida Night-hawk, Prairie's Flycatcher, Least Flycatcher, Prairie Horned Lark, Blue Jay, Bullock's Oriole, Lark Sparrow, Song Sparrow, California Towhee, Barn Swallow, Tree Swallow, Loggerhead Shrike, Carolina Wren, Bewick's Wren, Wilson's Thrush.

A single specimen of each of the above 35 species is worth \$8.21. My price for entire lot prepaid is only \$2.50.

European Eggs:

Moorhen, Blackbird, White-throat, Redstart, Yellow Bunting, Chaffinch, Hedge Sparrow, Greenfinch, Robin, Sand Martin, Willow Warbler, Tree Sparrow, Song Thrush and House Sparrow.

My price for one specimen of each of the above 14 European species is only 36c prepaid.

Specials in Single Eggs:

Emeu, prepaid, only	\$ 77
Ostrich " "	63
Alligator " "	14
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Eggs in Sets:

Wood Ibis 1-3, Black-crowned Night Heron 1-4, Florida Burrowing Owl 1-2, American Crow 1-4, Yellow-breasted Chat 1-3, Mockingbird 1-4, Brown Thrasher 1-4, White-throat 1-4, European Redstart 1-4, Chaffinch 1-5, Greenfinch 1-5.

The above 11 sets catalogue at over \$5.00. Entire lot prepaid for ONLY \$1.75.

American Starlings:

Red-winged Blackbird 1-4, Tricolored Blackbird 1-4, Orchard Oriole 1-5, Boat-tailed Grackle 1-3.

The above 4 sets worth \$1.25, prepaid for ONLY 35 CENTS.

FRANK H. LATTIN, ALBION, N. Y.

BIRD SKINS.

Worth double my prices but will close them out at prices quoted prepaid. The following are in pairs and prices given are per pair:

	Worth.	My price Prepaid.
Royal Tern	\$5 00	\$2 60
Common Tern	2 00	1 25
Anhinga (female poor)	5 25	2 70
Wood Ibis	8 00	4 00
Yellow-crowned Night Heron	5 00	2 60
Snowy Plover	2 00	1 05
Florida Red-shouldered Hawk	3 50	1 90
Desert Sparrow Hawk	2 00	1 10
Mexican Jacana	3 50	2 00
California Partridge	2 00	1 10
Steller's Jay	3 50	1 50
Cerulean Warbler	1 25	65
Black-throated Gray Warbler	1 50	70
Townsend's Warbler	4 00	1 75
Vigor's Wren	1 50	70
Western Winter Wren	1 09	50
Chestnut-backed Chickadee	1 59	60
Tree Sparrow	50	40
Snowflake	70	30

Of the following I offer single skins only—usually male specimens:

	Worth.	My price postpaid.
Yellow-crowned Night Heron, poor female	\$1 00	60
Pink-sided Junco	50	35
Rock Sparrow	1 00	50
Blue Jay	35	25
Oregon Towhee	40	25
Slate-colored Junco	25	15
Anna's Hummingbird	75	45
Phainopepla	1 00	50
Rusty Song Sparrow	50	30
Snowflake	35	15
Parula Warbler	25	20
Black-throated Blue Warbler	35	25
Myrtle Warbler	25	20
Audubon's Warbler	50	30
Black-poll Warbler	25	20
Black-throated Green Warbler	30	20
Mourning Warbler	75	40
Red Squirrel	50	35

On an order of \$5.00 or over at my special prepaid prices I'll allow an additional discount of 10 per cent.

FRANK H. LATTIN, ALBION, N. Y.

Collectors, Dealers, Everybody.

Take Notice. Owing to my change of location to Rochester, N. Y. June 1st I am offering unheard of bargains in Glass Eyes, Instruments, Birds Eggs, Bird Skins, Minerals, Shells, etc. Send for list quick. Offer limited to month of May. Address ERNEST H. SHORT, Albion, N. Y.

THE OÖLOGIST.

VOL. XVII. NO. 5.

ALBION, N. Y., MAY, 1900.

WHOLE NO. 166

THE OÖLOGIST.

A Monthly Publication Devoted to

OÖLOGY, ORNITHOLOGY AND
TAXIDERMY.

FRANK H. LATTIN, Editor and Publisher,
ALBION, N. Y.

Correspondence and items of interest to the
student of Birds, their Nests and Eggs, solicited
from all.

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Work to Do.

RICHARD C. MCGREGOR.

Among the many readers of THE
OöLOGIST there are probably not a few
bird and egg collectors who have been
exposulated with, for their wanton and

cruel acts, by well meaning acquaint-
ances. When we remember that these
people do not understand the pleasure
of wading knee-deep in the marsh for
Coot's and Blackbird's eggs, or of
tramping twenty miles a day for a
Hawk's nest, we can smile and forgive
them. But what rasps one, is to read
the opinions expressed by some of our
ornithologists. That they do no end of
collecting themselves we have abundant
evidence. Still these very men advise
us to limit our collections to one or two
sets of eggs and three or four skins of
each species. They tell us to study
birds with a field glass and if we want
to see a bird in the hand, to go to some
of the numerous large public collections.
That may do well enough for those in
Wash-_{ington}, Philadelphia, or New
York, but there are a few bird students
who do not live in or near any of these
large cities.

If the American Museum and the
Philadelphia Academy of Sciences
bring together large series of skins, are
we not justified in following so good an
example? Those high in authority say:
No, but they do not give the real reason
which is just this. The museums have
fireproof buildings, curators to care
for specimens, and scientists who study
this material, making contributions to
the sum of scientific knowledge. With
these large collections, carefully pre-
served, they are able to discover new
facts in regard to moulting, distribution,
variation in plumage, etc.

Now a beginner gets birds and eggs
much as a philatelist collects stamps,
to see how many kinds he can find. He
goes on in this way for from one to
three years, and then, the novelty of
mere collecting being lost, the whole

lot is discarded and forgotten. No real use is made of these birds.

So the reason we are discouraged from making large collections, is that so many of us never make any real use of the birds, and to destroy life for no better reason than has the stamp or coin collector for his business, is not justifiable. But the beginner may have a genuine interest in birds, and may be willing to work hard to add his part to science. Every ornithologist has to make a start by collecting, that he may know the birds. So every chance should be given him that he may do good work. It is for this reason that I wish to tell him some of the things which may be studied at the same time he is making his collection.

To identify your specimens is the first step in any branch of zoological work. If in a new field you may find undescribed species and they are to be attended to. But among birds there is little of this work. Ornithology stands at the head in systematic work. In no other branch of zoology is the nomenclature so nearly fixed. Practically all the species and sub-species of North American birds have been named and fully described. The eggs of nearly all species on our check-list are known.

Several of my personal friends have begun on birds, but finding the race for novelties too keen, have gone over to fishes, mammals, insects or plants. These men will affect to despise systematic work and will tell you that they do not like to be troubled with naming new species, yet I find these very men have done the most in that line and often have done nothing else.

New species of birds are now to be had only by travel in far countries, contending with tropical or polar temperatures. For those who must remain at home and who have plenty of time it is left to take up other, but equally, valuable and interesting work. For these I wish to make a few suggestions as to what is to be done.

There is nothing new here, only a gathering together to give the novice some idea of the rich harvest which awaits him, requiring only patience and accurate observation for the reaping. There may be uncertainty as to what your results will be, this makes the discovery all the more delightful, but that you will find something there is no doubt whatever.

In the first place keep a note book and write down everything you find out, for even the most common facts will escape your memory.

1. Local list.—Keep a full list of all species which occur in your locality, when they are with you, how abundant, and the kind of country each inhabits.

2. Migration.—Notes on migration belong with the local list.

3. Nesting records.—These should include dates of all nests found, number of eggs or young, actions of parents, etc. A complete investigation of some one species or genus may be taken up. Howe's "Breeding Habits of the American Robin in Eastern Massachusetts" (Auk, XIV, 162,) is an excellent model and shows what may be done on a common species.

4. Incubation.—This is a life time study in itself. Nothing is known of the necessary conditions of moisture and temperature and but little as to the normal period of incubation.

5. Food.—Very little is known, except in a general way, of the normal food of birds or about the effect of various foods. This may be studied by direct observation of the wild birds, from stomachs, from pellets of such species as eject food remains from the mouth, and by feeding captive young and adults.

6. Studies on young.—This may be carried on along several lines at once, quite enough to keep one observer busy during all his spare time. Some of these lines are food, feather growth,

growth in weight, instinctive habits, and experiments on special senses. Owen, on "A Captive Hermit Thrush," (Auk, Jan. 1897,) gives many valuable hints for the study of young birds. The same observer has reported on the growth of the young Song Sparrow.

7. Feathers.—Under this head we may study the relative development of the feather tracts, rate of growth in wing and tail feathers, and the phenomena of moult. A very simple and easy observation to make is the number of feathers cast each day during a moult. Chadbourne, (Auk, XIV, 140,) says; "In the living bird accurate data of the loss before and during the progress of a complete moult are, I believe unpublished." A lookout should be kept for albinism, melanism and hybridism.

8 Variation.—This is a subject with which but little has been done. It requires a very large series of one species and is best undertaken by those situated where two subspecies overlap, that is, where intermediate forms occur.

Do not think that I decry the making of a collection. You should have a fair series of each species found in your locality, so that you may recognize any straggler, hybrid or strange plumage. Collect all the specimens you need for working out an uncertain point. If you do not recognize a bird, shoot it. But do not make a collection to show your friends, or to have more than any one else in the town. Make the most of every bird you kill and when you discover something new or unusual, write it up for publication so that others may know the results of your work.

treme length and width it is about twenty-one by nine miles. Some of the hills are still clothed in forest a portion of which exhibits the dense tangle of vine and bush of innumerable species of the tropical forest, also some of the creek bottoms are likewise thickly grown with small growth, but the virgin forest, the giant trees of the primeval timber are gone forever, a sacrifice to the cupidity and vandalism of Spain.

In valley and on hillside in many places acre upon acre of sugar cane waves in the breeze in an uninterrupted expanse. Over other like expanses the luxuriant growth of grass furnishes an abundant pasturage for numerous oxen. Small tracts here and there are devoted to gardening. Throughout the open country occasional trees and copses of bushes are scattered. The fences are many of them hedges of the "Spanish bayonet" cactus, and these hedges intergrown thickly with rank grass form havens of retreat for many birds—and also for the Mongoose. This latter and a wood rat, nesting in trees, have undoubtedly effected the avifauna of the island to a very large extent. Ground nesting birds must have been seriously disturbed by the extreme abundance of the Mongoose which in predacious habits surpasses the ermine or mink. A representative of the Bob-white formerly recorded from the island of Porto Rico seems to be rare now if not quite extinct.

In presenting this list I would say that it is the result of some three months observation in November and December of '99 and January and February of the present year, made under many difficulties and that I was constantly hampered by military duties.

The Gulls and Terns seen were none of them secured hence remained unidentified and the same was the case with the majority of the water birds. Consequently the list chiefly represents the more conspicuous winter birds of

Some Winter Birds of the Island of Vieques

BY B S BOWDISH.

The Island of Vieques lies about fifteen miles off the eastern end of Porto Rico and in general topography much resembles it on a smaller scale. In ex-

the island and lays no claim to even an approach to completeness.

Pelecanus fuscus. Always abundant and often easily secured. A male shot Dec. 23d contained in stomach and throat 27 herrings averaging about four inches each in length. I removed and preserved from the inside of the body close to the stomach three small parasitical worms. This pelican measured, length 45½ inches, extent 79 inches.

Fregatta aquila. Often seen singly or in twos and threes soaring over the surf near the beach fishing, sometimes in company with the pelicans. A male secured Dec. 16th, disgorged a sharp-nosed fish about 8 inches in length. Stomach was empty.

Florida coerulea. Common though not as abundant as the next.

Ardea virescens. Very abundant on the lagoons at the mouths of creeks these herons were nearly always found from one to a dozen specimens, sometimes associated with *coerulea*.

Actitis macularia. Quite a common bird along the beach and on the lagoons. Sometimes associated with the following.

Ægialitis wilsonia. Seen a few times in flocks of a dozen on the beach. One male secured Nov. 5th. None were seen after Dec. 1st.

Columba —? Common. Three specimens secured. The only large pigeon noted.

Zenaidura macoura. Very common. Apparently not so common as the foregoing. A number were seen in twos and threes feeding on the ground much after the fashion of Bob-whites. Dec. 30th I secured a male.

Columbigalma passerina. Quite abundant.

Buteo borealis. Several pair were noted and they probably breed here. Shot Jan. 26th. The stomach contained the bones and fur of a rat probably of one of the wood rats.

Falco dominicensis? Sparrow hawks

are not apparently abundant. On Dec. 17th. I shot a male and Jan. 18th I shot a female and while putting it up the male came to the same tree from which his mate had been secured and I got him also. They seem much less suspicious than the bird of the State. The male above referred to came within ten feet of me when alighting in the tree. Prof. Richmond who is here with Prof. Stejneger collecting, would not pronounce positively on these birds whether they were *dominicensis* or *cribaeum*. The stomach contents in the first of the three hawks above mentioned was far digested and not identifiable. Of the other male were grasshoppers and the fur and bones of a mouse, while the stomach of the female contained grasshoppers only.

Pandion haliaetus carolinensis. Two pair were noted and the male of one secured Dec. 31st. Stomach was empty.

Crotophaga ani. Very abundant and often seen in large flocks, feeding in the pastures and along the creeks. They must breed very early for on Jan. 28th I shot from a small (probably family flock,) five birds of which two were young, male and female respectfully, on the wing, but undeveloped in size and plumage. Stomachs of a fair series of these birds show insects, seeds and fruits chiefly the latter two. In Vieques I meet with no example of their nesting but in the mountains back of Catania, P. R., July 21, '99 I found a pair working on a nearly completed nest about twenty feet from ground in a tree at the edge of woods and by the foot of a hill. The nest was apparently almost wholly constructed of twigs and was roofed like the nest of a magpie.

Coccyzus minor dominicata. Several were noted but none secured. On the main Island I shot one.

Ceryle alcyon. Shot male Dec. 10th. Noted a number of pairs on the creeks.

Melanerpes portoricensis. Fairly common. The only Porto Rican representa-

tive of the *Picidae*. In habits much like the Red-headed Woodpecker of the State, with simular garulosity.

Antrostomus carolinensis. A number were noted in one creek bottom two females secured. (A Hummer was noted similiar to specimens secured on the main island, but as these are unidentified they cannot be included.)

Tyrannus dominicensis. By all means the commonest bird of its class. A fair series were obtained and stomach contents proved that the birds do not confine themselves to insects, as berries and seeds of same were often found in them.

Pitangus taylori. Quite common though not nearly so much so as the preceeding species. Probably not always separated from *Tyrannus*. Often associated with the above.

Myiarchus antillarum. Not so abundant as the above. In habits quite similiar to the *Proebe* which it resembles to quite an extent.

(Probably *Icterus portoricensis* is found on the island as it is very abundant on the main island, but as it was not noted it cannot be included.)

Quiscalus brachypterus Common. Often noted in large flocks.

(*Ammodramus savannarum* and *Pyrrhuloxia portoricensis* were neither of them noted but most likely occur.)

Euthia bicolor. One of the most common birds. I found them breeding from Nov. 15th to Feb. 9th, the day before I left the Island on which day a nest found containing one fresh egg. The composition of the nests is commonly fine dry grass, rootlets, skeleton leaves, etc. It is shaped much like the nest of the Marsh Wren, a ball of grass etc., with an entrance in the side and is commonly built in a bush or small tree at an elevation of 2 to 10 feet. It is not always distinguishable from the nest of the Honey Creeper but is usually not so bulky nor so firmly and well built. Sets consist of two or three

eggs. No sets of four were noted. Set $\frac{1}{2}$ Nov. 15th nest fine grasses, rootlets, skeleton leaves, etc., 7 ft. from ground in fork of bush in pasture. Eggs fresh. Set 2-2 Nov. 19th, fresh. Nest same as last 6 feet up in small bush by roadside. Set 3-3 Nov. 19th far advanced, nest fine rootlets, skeleton leaves, weeds and grasses, 8 ft. up in bush by roadside. Set 4-2 Nov. 25th far advanced, nest fine grasses, weed stems, skeleton leaves, 4 ft. from ground in top of bush by fence near creek. Set 5-3 Nov. 27th, 1 fresh 2 slight. Nest same composition as foregoing, 3 ft. from ground and fairly well concealed in thick bushes in pasture. Set 6-3 Nov. 30th, far advanced, nest dry grasses and skeleton leaves, measurements outside diam. $3\frac{1}{2}$ in. inside, depth 6 in. inside, $1\frac{1}{2}$ in., $2\frac{1}{2}$ ft. above ground in tops of Spanish bayonet and grass by edge of woods.

Set 7-3 far advanced, nest entirely made of dry grasses, measurments outside diam., $5 \times 2\frac{3}{4}$ in. inside, $1\frac{1}{2}$ in. outside, depth $4\frac{1}{2}$ in. inside, $2\frac{1}{2}$ in., situated in dense wall of a kind of jointed climbing grass and being composed of the same material was extremely well hidden. A chance blow on the grass with a stick caused the bird to leave, thus drawing attention to the nest. Going back to this nest which was in a woods on a hill, on Dec. 30th, to obtain a photo of this unusual nesting site, I was quite surprised to see the bird again leave the same place. Examination disclosed a nest exactly similiar to the one of set 7-3 and placed in same spot.

The sun being at the time hidden, it was necessary to make a time exposure so an improvised tripod was constructed of poles bound with vines. Soon after the nesting site was photographed the sun coming out, I made a photo of the tripod with my partner standing beside it drawing a bead with my gun on imaginary bird above.

Set 8-3 Dec. 19th, far advanced, nest dried grasses, skeleton leaves, fine root-

lets and horse hair, measurements, diam., $3\frac{1}{2} \times 1$ in., depth $8 \times 1\frac{1}{2}$ in., situated in tips of limb of tree 8 ft. above road. Set 9-3 Dec. 30th, fresh, this was the second set from the nest in the bank of grass. Set 10-3 Feb. 9th, fresh nest, fine roots, weed stems, skeleton leaves, etc., in tips of slender bush growing from mass of Spanish bayonet, on bank of road 10ft from ground.

Set 11-3 Feb. 9th' fresh nest composed of fine dead vines and situated in a mass of some hanging from limbs of tree by pasture fence. Was very inconspicuous.

This bird is rather shy in its habits, is not a close sitter when the nest is approached and will not come within close distance of nest while intruder is by remaining most of the time concealed in bushes.

Euthia brijectita. Not quite so common as preceeding. Though they were undoubtedly breeding and though I shot a female Jan. 30th containing an egg nearly to be deposited, I failed to locate a nest.

Progne donimicensis. A few noted in village just before our departure. Would probably have become common a little later.

Virco calidris. A few noted.

Coccyzus porphyrio. Abundant. nests with eggs were taken Feb. 4th, Feb. 7th, and 9th. In structure and location they are much like those of *Eutthra bicolor* with the differences noted in the description of that bird. Three or two eggs is the common number; I have taken but one set of four.

Miniotilta varia. A few noted. Three specimens taken.

(*Dendroica ruficapilla* must I think occur but strange to say was not noted)

Dendroica coronata. Three specimens in moulting plumage showing approach of summer plumage, were taken.

Dendroica discolor. Abundant. A number of specimens taken.

Compsothlypis americana. Abundant

This and preceeding were by far the most common warblers.

Seiurus aurocapillus. Several noted. One secured

Seiurus motacilla. Noted a number and secured two females and a male. According to Prof. Richmond this bird was recorded from Porto Rico, and I gave him one of the skins for the Smithsonian.

Sceloporus ruficollis. Secured two males and noted several others.

Mimus polyglottos orpheus. Not abundant when we went to Vieques but becoming common and vociferous as we came away.

Margarops fuscatus. Not uncommon in the creek bottoms but extremely shy and secured with great difficulty keeping mostly well concealed in trees and bushes. Many of the notes of these birds resemble certain notes of Robin and of Wilson's Thrush in states and the alarm cry is scarcely distinguishable from that of the Catbird. I secured two females Jan. 28th.

(*Mimocichla ardisiacea* which I found commonly on the main island was here not noted but probably occurs)

Our Western Blackbirds

499a CALIFORNIA BLACKBIRD. (*Agelaius californicus*:—Our western redwing, formerly known as the Bicolored Blackbird, is a common summer resident in the marshes of Santa Clara Co. California. The date of their arrival here in spring is usually about Mar. 1st, although I have noted them as early as Feb. 8th, and it is indeed a pleasant reminder of spring to hear their cheery "quong-quer-tee" after the long winter is over. The first few weeks after arriving here is spent in company with the Brewer's Blackbirds feeding in large flocks upon the wheat and barley in the hay fields which have just been sown at this time, but as the spring advances, they break up into smaller com-

panies and locate in the hay field or tule swamp in which they intend to nest.

Nest building is begun about the 1st. of April and the site is usually a clump of tules in a swamp, although a bunch of mustard in a grain field is sometimes selected. As I have never seen a male bird carrying nest material, I believe the female does all the nest building, although I am not well enough informed to say positively. The nests are all alike, a typical one being a compact structure composed of tules and rushes, lined with fine dry grass.

There is always more or less mud in composition of nests found in the tule swamp, but I think this is caused by the birds using dead rushes for nest building, which are perhaps lying in the mud. This mud dries in time and gives the impression that the birds placed it there intentionally. Nests found in grain fields or away from running water never have any mud in them, and are loosely constructed of straw and dry grasses, lined with fine dry grass and sometimes horsehair. In tules the nests are seldom higher than two feet above the water, while in grain fields the average is usually three and sometimes even four feet up. I think that perhaps the water under the rushes gives the birds a sense of security which those building above land cannot have, for the danger of having their nests robbed by snakes, or their fledglings destroyed by prowling cats is thus materially lessened.

I remember when I was a small youngster a terrible commotion which I once noticed among the Blackbirds adjacent to our home. The birds (there must have been over one hundred of them,) were all hovering over a certain spot in the field and making a terrible noise, so I constituted myself an investigating committee of one to find out the trouble. Upon nearing the spot I found a huge gopher snake entwined

about a large mustard stalk to which a blackbird's nest was fastened, and just in the act of swallowing a young blackbird almost ready to fly. Two suspicious lumps in the snake's body were circumstantial evidence enough to convict him of murder in the first degree, while one young bird perched upon the far edge of the nest was viewing in wild-eyed horror the disappearance of bird No. 3, and no doubt speculating upon the terrible fate which awaited him also. The old birds were swooping at the snake and endeavoring in every way possible to attract his attention, but could not succeed. Promptly accepting the office of judge, jury and executioner I took Mr. Gopher snake by the tail carried him from the field and cracked his skull. The bird he was endeavoring to swallow was all this time fastened between his jaws and he could neither get it up or down.

The eggs are three or four in number; and sometimes, but rarely five. Last year I noted a nest containing three young birds and two addled eggs, this being the first nest I have ever seen which held over four. The majority of nests last year held only three eggs. The eggs are bluish white in ground color, and are marked, chiefly around the larger end, with wavy lines of dark brown and black. In comparing eggs in my collection with those of the Red-wing; the eggs of the California Blackbird seem to have more and longer lines upon them. Fresh eggs can be taken as early as April 20th. and the nesting period extends through June. After the young have all hatched the birds congregate in large flocks and spend most of the time in the pasture fields until they migrate in the fall.

500 TRICOLORED BLACKBIRD. (*Ajelaius tricolor*):—This bird replaces the California Blackbird in the interior valleys of California. It has never been found nesting in this part of the Santa Clara Co. although it has been

recorded as nesting in the marshes near Gilroy and Sargents, about thirty-five miles south of Santa Clara, in the extreme southern part of the county. The nesting and other habits and eggs of this bird are identical with those of the California Blackbird. What has been written of the California Blackbird will apply to this bird also.

510 BREWERS BLACKBIRD. (*Scolecophagus eyanocephalus*:—This beautiful Grackle, usually known as the Tree Blackbird is an abundant resident of this county at all times. He can always be found in the pastures among the sheep and cattle, where he sits contentedly upon the backs of one of these animals, occasionally pecking a grub or flying to the ground to pick up some worm or other tempting morsel of food. In the winter a flock of these birds will follow a plow and catch the earth worms as fast as they are turned up and they also delight to follow a sower in the grain fields and eat the grain. They are always a sociable bird, several pairs always selecting the same tree for a nesting site.

They like to build in the neighborhood of a house or barn, although I did find several nests in a large weeping willow tree in a grain field about one mile from a house. Nest building begins about the 1st. of April, the nest being composed of an outer layer of twigs, straw and rootlets, cemented with mud or manure and almost invariably lined with a thick layer of horsehair. It is usually placed at the top of a large weeping willow tree in a fork about twenty feet above the ground, or in twigs at the end of a drooping limb, although I have found them in evergreens and flowering shrubs in a garden, not higher than five feet. The earliest date at which I have taken eggs is April, 22nd and from this time until well along in June, eggs may be taken. The eggs range from four to six in number, usually four, and in

color are among the most beautiful of our western birds' eggs, especially for a series, the markings being remarkably variable. A typical set has a ground color of greenish white, with numerous markings and blotches of brown and black, but I always find a few sets every year which are so heavily marked with dark brown blotches as to give the eggs the appearance of being a solid brown color. Of course there are a great many sets to be found the eggs of which vary between these two extremes, and some of these are very odd and beautiful.

Although Brewers Blackbird is not a songster in any sense of the word, and sometimes eats the grain and fruit, I think he more than repays us for the damage he does by his sociable habits. He is also an independent and sometimes a pugnacious fellow. I have often seen one of these birds chase a Western Redtail or Turkey Vulture and peck at them until they were glad to take refuge in flight.

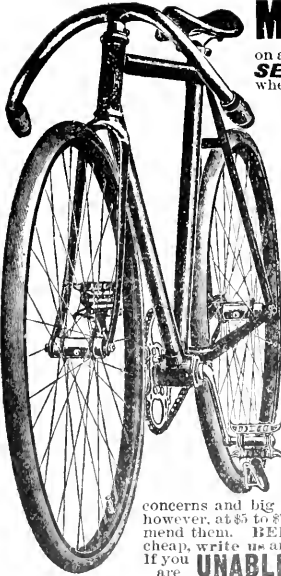
WM. L. ATKINSON,
Santa Clara, Cal.

An Albino Marsh Hawk.

On the 18th day of April, 1900, while traveling the public highway one and one-half miles north of Albion, a bird flew toward me close to the ground that I at once called a hawk but different from anything I had ever seen. Fortunately the bird crossed the road very close and I was able to identify it. It was within 100 feet of me and every feather showed plainly. Its general build, the low flight, and pure white patch at base of tail, left no doubt as to its identity, but the head and neck, all of the back and the wing coverts were of a uniform creamy white instead of the usual brown and rufus pattern.

Of course I had no gun, so the old bird is probably on earth to puzzle some one else. On the 4th, of March last, I secured a fine male Greater Redpoll which so far as I know, has not previously been recorded in Western New York. Its larger size, short, thick beak and wider tail feathers, all serve to distinguish it from the common species.

ERNEST H. SHORT, Albion, N. Y.



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VOLUTA. Twenty (20) species, 25 specimens, containing *virelens*, *harpa*, *horns*, *cummingii* and 16 others. List value \$28.20. My price only **\$8.40** prepaid.

OLIVID.E. Forty-nine (49) species, 94 specimens, comprising *maura*, *porphyria*, *duclosiana*, *mustelina*, *bulbiformis* and 45 others. Regular price \$11 60. My price **\$3.40**, prepaid.

CONID.E. Fifty-six (56) species, 70 specimens. *Imperialis*, *betulinus*, *figulinus*, *cardinalis nanus* and 51 others are in this collection. Regular price \$20 45. My price only **\$7.40**, prepaid.

CYPRÆID.E. Thirty-two (32) species, 40 specimens. Specimens of note are *Mappa*, *spadicea*, *stercoraria*, *ventriculus* and 28 others. Regular price \$9.05. My price only **\$3.35**, prepaid.

UNIONID.E.—One hundred and thirty-four (134) species (American) 450 specimens. All fresh live specimens. Worth at regular prices fully \$100. Will send the entire collection prepaid for only **\$28.40.**

RARE OLD SILVER COINS of Great Britain.—A collection of 50 pieces from the reign of Henry II (1154) to that of Victoria. The collection contains coins minted during the reigns of twenty two (22) of Great Britain's monarchs. The collection lists about \$55 00, will sell as a whole for **\$22.50** prepaid.

FOSSIL COLLECTION. A specially selected collection of Fossils for school used to I sell at \$100. One hundred (100) species and about 500 specimens ranging in value from 5c. to \$1 00 each. A very select and very valuable collection and is largely composed of Fossil Corals, all carefully labeled and prepared, and well worth \$100. My price **\$33.50** prepaid.

I have another collection similar to above but up to sell at \$50.00, 100 species and about 200 specimens which I will send prepaid for only **\$15.75.**

MOUND BUILDER'S RELICS. We have hundreds of ordinary arrow and spear heads and a few of the more common pieces such as sinkers, drills, scrapers, &c, but have very few of the rare and desirable ones. The following we offer at about one-half regular prices: Pipe from Brant Co., Ont., a very choice specimen, **\$4.90**, prepaid; another from same locality of a more common and unattractive form, **\$1.60**, prepaid; Slate Pendant from Waterloo Co., Ont., prepaid, **55cts**; Rematite Celt from Van Buren Co., Ark., prepaid, only **\$1.20**. Ordinary Stone Axe from Cumberland Co., N. J., prepaid, **\$1.30**. I also have the contents of a cache from Rowan Co., N. C., consisting of about 400 unnotched arrow or spearheads of uniform size and form, about 2½ long, will sell as a whole *very reasonable*.

NEPTUNE'S CUP or Vase Sponge, *Paterion*, from Tasmania. An odd and curious specimen worth from \$15 to \$20, and we have never offered this specimen for less than \$10 prepaid. It measures 24 in. high and the vase portion is 12 in. in diam. It goes prepaid for only **\$7.60.**

SPANISH CROSS inlaid with straw from an ancient church in Jemez, New Mex. Curio dealers would ask \$5.00 for it, but it's yours prepaid for **\$1.65.**

AN EGYPTIAN IDOL, carved from stone or lava 1000 or more years ago, represents an elephant or some other animal, measures about 4x2½ in. Secured by a missionary acquaintance from a mummy pit in Egypt and guaranteed genuine. Prepaid only **\$3.15.**

LARGE CORALS. 1 specimen of the Plate Brain Coral, *Meandrina clivosa*, from Bahamas measuring 22 in. in long diameter (16 in. short) worth \$10; one of true Brain Coral, *Meandrina cerebriformis*, 11 in. diam. worth \$5.00; one specimen of Pineapple Coral, *Periles astræoides*, 10 in. diam. worth \$3 00, will send the three specimens prepaid for only **\$8.60.**

Address **FRANK H. LATTIN**, Publisher, Albion, N. Y.

THE OÖLOGIST.

A MONTHLY PUBLICATION DEVOTED TO
OOLOGY, ORNITHOLOGY AND TAXIDERMY.

VOL. XVII. NO. 6.

ALBION, N. Y., JUNE, 1900.

WHOLE No. 167

Wants, Exchanges, and For Sales.

Brief special announcements, "Wants," "Exchanges," "For Sales," inserted in this department for 25c per 25 words. Notices over 25 words, charged at the rate of one-half cent per each additional word. No notice inserted for less than 25c. Terms, cash with order.

Strictly First-class specimens will be accepted in payment at one-third list rates.

What's Your Number?

Examine the number following your name on the wrapper of this month's OÖLOGIST. It denotes when your subscription expired or will expire.

No. 167 your subscription expires with this issue

170	"	"	"	Sept. 1900
173	"	"	"	Dec. "
175	"	"	"	Feb., 1901
180	"	"	"	July, "

Intermediate numbers can easily be determined. If we have you credited wrong we wish to rectify.

EXCHANGE.—Fore eggs in sets or singles; new $3\frac{1}{2} \times 3\frac{3}{4}$ Camera. Spectroscope; Eggs in sets. ERNEST H. SHORT, Albion, N. Y.

HAVE you got Nowell's Collector's Tool for this season's work? If not, send 90 cents to J. R. NOWELL, Portman, S. C. and receive one by return mail

WANTED.—Coores' Key or Ridgeway's Manual, latest edition, good as new. State lowest cash price. A. E. PRICE, Grant Park, Ills.

TO EXCHANGE for fine sets: One hundred species as 134a, 151, 187, 222, 277a, 288, 293, 325, 326, 337a, 342, 355, 362, 419, 457, etc. Send for complete list enclosing yours. J. M. & JAMES J. CARROLL, Waco, Texas.

FOR SALE.—2 Bear Cubs. Fine healthy little fellows, will be about two months old when this ad. appears. 1 Brown, 1 Cinamon. CHRIS. P. FORGE, Carman, Man.

FOR SALE.—Eggs with nests and without, also have sets of cigarette buttons among which are Flags of Nations, Seals, Noted Men and others. Send for lists. Address. GEO. W. THOMPSON, Jamaica Plain, Mass.

AFTER September 10th I shall be able to offer skins of birds from this locality for the commoner eastern species. J. O SNYDER, Stanford University, California.

FOR EXCHANGE.—The following well mounted birds, Nos. 1, 375, 581e, 567a, 534, 535, 515, 662, 417, 412, also Vol. III of *Nidologist*, stamp collection and climbers for mounted birds, golf clubs, or eggs in sets. WM. H. EASTMAN, 478 Lebanon St., Melrose, Mass.

A FINE Cream Colored variety of the Marbled Godwit. Well mounted skins of Manitoba birds and bird's eggs. CHRIS. P. FORGE, Carman, Man.

WANTED.—Nos. 4, 5, 6, 8, 10, 11, Vol. I of *Nidologist*: Nos. 2-4, Vol I of *Osprey*. Liberal price paid. GUY O. RICH, M. D., Toy Building, Sioux City, Iowa.

BARGAINS.—Snapping Turtle 1-17 2-28 1-29 1-41, Red-leg Turtle 1-5 3-6 2-7 2-8 2-9. Price 3 cents per egg, prepaid. All first class, data. JAS. O. JOHNSON, Southington, Conn.

WANTED.—One skin each of Snowy Heron, Louisiana Heron and Reddish Egret of this season's collecting. F. M. RICHARDS, Farmington, Maine.

FIELD or MARINE GLASS.—New, worth \$10, extension hood, case and shoulder strap, "Jumelle" make. Will send *prepaid* for only \$5.90. FRANK H. LATTIN, Albion, N. Y.

FOR SALE.—Red-shouldered Hawk 1-3, 50c; American Crow 3-6, 24c; Blue Jay 2-6, 24c; Common Tern 1-3, 14c; Song Sparrow 1-4, 8c; Flicker 1-5, 12c; Sunas Hummingbird n-2, 75c; Black-chinned Hummingbird n-2, 75c; Wood Thrush 4-4, 10c; Spotted Sandpiper 2-4, 24c; Green Heron 1-4 24c, 1-5 30c; Bronzed Grackle 1-4, 16c. The above prices are per set. Prepaid at price. JAS. O. JOHNSON, Southington, Conn.

WANTED.—Skeletons and Skulls, all kinds, in rough and mounted, Bird and Mammal Skins, Reptiles and Batrachians in alcohol or formalin. Desire correspondents in all parts of United States, Mexico and Canada. Back numbers of papers on Natural History and scientific books wanted. Offer in exchange fifty species finely prepared Invertebrates in formalin, eastern bird skins, etc. Correspondence solicited. F. P. DROWNE, 20 Benefit St., Providence, R. I.

HEAR YE! Hear Ye! Hear Ye! This is to certify that my advertisements in the OÖLOGIST have paid me better than have the combined ads. in most of the amateur and natural science papers. Ads. in the OÖLOGIST always bring returns, and it is safe to say that there is no paper having three times the circulation of this widespread periodical which can give equal satisfaction. MORRIS GIBBS, M. D., Kalamazoo, Mich.

WANTED:—Eggs in sets with nests of all Warblers, Waders, Vireos and Thrushes. Send list of what you have and cash or exchange price. Send 10c for large illustrated catalog. CHAS. K. REED, 75 Thomas St., Worcester, Mass.

TAXIDERMIST'S OUTFIT:—Contains one heavy Cartilage Knife; 1 nicked and engraved Scalpel with tip shaped for detaching skin, muscles, &c; 1 pair Scissors; 1 pair Forceps; 1 Dissecting Hook; 1 Brain Spoon; 1 pocket Wire Cutter. Instruments best, all packed in polished Hard-wood Case. A better outfit than the one always sold at \$3. I have only four outfits and will close them out at only \$2.20 prepaid. FRANK H. LATTIN, Albion, N. Y.

TAXIDERMIST'S COLLECTING GUN. Made to order. Cost me \$12.50 and expressage as a dealer. Can be readily taken apart in center and carried "out of sight." Takes regulation 45-70 shell. Gun with complete outfit (50 brass shells, 250 primers, 1000 wads, de and re-capper.) All prepaid only \$10.50. FRANK H. LATTIN, Albion, N. Y.

PLATE HOLDER—Double, 5½x5½, Blair Camera Co., (\$1.00), prepaid 4c. FRANK H. LATTIN, Albion, N. Y.

C. B. VANDERCOOK, Odin, Ills. pays 50c per hundred cash for Star, Horse Shoe, Cross Bow, Good Luck, Drummond's Natural Leaf J. T. tobacco tags. Those painted on under side. Offer expires November 1st. 167

GLASS EYES.—Lot No. 1 contains one pair each Nos. 8 and 15 yellow, No. 9 hazel, No. 18 brown (worth 4c), all prepaid 24c. Lot No. 2 contains one pair each No. 19 brown style two (veined) for Bear and Nos. 23 and 24 style four (veined, long pupil and cornered) for Deer (lot worth \$1.31). All prepaid, only 76cts. FRANK H. LATTIN, Albion, N. Y.

"SNAPS" for TAXIDERMISTS ET. AL:—Chain and Hooks (25c), 16c; 7in. Stuffers, spring handle (1.25), 80c; Scissor-handle Stuffers, 12in. (\$1.75), 1.05; Scissor-handle Stuffer, 15in. (\$2.50) \$1.60; Bone Cutters, extra fine and heavy, (\$2.50) \$1.60; 38 cal. Wad Cutter, (40c) 22c; Pinning Forceps for Insects (\$1.25) 78c; Botanical Collecting Can with shoulder strap, size 12x7½x3½ in. (\$1.50) \$1.10; Tenaculum or Dissecting Hook, folding in handle (\$1) 28c. All prepaid at prices quoted, regular prices in (). FRANK H. LATTIN, Albion, N. Y.

WANTED.—Will trade books of all kinds for good matched pairs of Ivory Elks teeth or single teeth; also collections of U. S. stamps bought for cash. Address, HALL N. JACKSON, 36 W. 6th St., Cincinnati, O. 170

YOUR ATTENTION is called to the great sacrifice sale of the collection of W. A. OLDFIELD of Deckerville, Mich., formerly of Port Sanilac. This is a great chance to secure some good and rare specimens at low price. See ad. in this issue.

U. S. WAR CENTS and REBELLION TOKENS. Issued 1861-65, same size as U. S. cent now in use, bearing peculiar designs, "Union Forever," "Not One Cent for Tribute," etc., etc. Some with merchant's names. Becoming rare. Will make neat pocket pieces. Boys, you can dispose of these old and curious war cents to your friends at a good profit. Supply limited. While they last will send one by mail postpaid for only 10c; 3 each one different for 25 cts. Stamps taken. O. J. SWANDER, Kenton, Hardin Co., Ohio. 171

FOR SALE:—Clutches of European species, White Gryfalcon, Gryfalcon, Merlin, Green Sandpiper, Greenshank, Golden Eagle, Gray Sea Eagle, Kestrel, Sparrow Hawk, Honey Buzzard, Peregrine Falcon, Hobby Egyptian Vulture e. Apply. GORTON, 2 Upper Gloucester St., Pendleton, England. 171

CODDINGTON MAGNIFIER(Miners' glass), diameter ¾ in, cost \$1.50, prepaid 96cts; also a 3 lens pocket magnifier in rubber case, only 60c, prepaid. FRANK H. LATTIN, Albion, N. Y.

INSECT PINS:—150 best assorted and 3 sheets 3x4x1-16 inch cork. All prepaid, only 29c. FRANK H. LATTIN, Albion, N. Y.

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WHAT can you offer in bird skins for fresh skin of young male Great Horned Owl in down? TROY W. BARNHART, Elkhart, Ind.

WANTED:—Voi 2 of "Birds," unbound. Offer in exchange set of 4 Marsh Hawk's eggs. Address, THEODORE B. PARKER, 36 Beaumont Ave., Newtonville, Mass

SKATE EGG, 3c; fossil tooth large, 10c; 15 choice curiosities, 12c; 100 sea shells, 12c; horse-shoe crab, 10c; shark egg, 5c; periwinkle egg case 5c; 5 relics, 15c. Price list, 1 relic, 25 sea shells and a Big Red claw, all for 10c. W. P. ARNOLD, Peacedale, R. I.

COLLECTION of Eggs for Exchange:—Sets of 16, 127, 194, 360a, 376, 331, 429, 430, 431, 460, 462, 466, 471, 482, 487, 488, 487, 505a, 620, 633a, 707a, 708, 710, 721a. LEE CHAMBERS, Santa Monica, Cal.

TO EXCHANGE:—2 Black Walnut, glass top egg cases, 34x26 and 18x22 inches respectively, made especially for eggs. For eggs in sets or old varieties of U. S. stamps. No postal cards answered J. NEWTON, Unionville, Conn.

EXCHANGERS:—You are hereby invited to send in your list of duplicate singles and sets, on receipt of same, I will mail you my list of singles and sets from which you may select, and you will be astonished at the prices I will give in exchange. Assist me by sending me your list and I will do the rest. ED KASCH, Lockhart, Texas

WANTED:—Good second-hand Ridgway's Manual or Coues' Key, also collecting gun for lowest terms in cash. Address, M. M. MYERS, Box 345, Cripple Creek, Colo.

EXCHANGE:—Bird skins, all in good condition, collected last year, including Great Horned, Pigma and Short-eared Owls, Western Red-tail Hawk, Whistling Swan, etc. Lists. AUSTIN COOPER, Nicomine, B. C. Canada.

WANTED:—Circulars and samples of mail order goods retailing from 5cts to 25cts. Mean business. O. J. SWANDER, Kenton, Hardin Co., Ohio.

50 different sets, all complete, full data; also a few Indian arrow Points. Will exchange for Al bicycle or sell cheap. J. D. PARKER, Danville, Knox Co., Ohio.

TEN Different first class Tennessee eggs, two nests and a complete set of 3-5 eggs in a third nest for fifty cents. IVAN STEPHENS, Winchester, Tenn.

TO EXCHANGE or SELL:—A limited number of nice skins of *Columba squamosa*, *Geotrygon montana*, *Columbigalina passerina*, *Falco dominicensis*, *Melanerpes Porto Ricensis*, *Tyrannus dominicensis*, *Pitangus taylori*, *Myiarchus antillarum*, *Lampornio dominicensis*, *Quiscalis brachypterus*, *Icterus Porto Ricensis*, *Crotophaga ani*, *Loxigilla Porto Ricensis*, *Euthia bicolor*, *Euthia bryanti*, *Coerba Porto Ricensis*, *Deudroicae ruficapilla*, *Vireo calidiro*, *Mimocichla ardosiacea* and others. Nests and sets of *Euthia bicolor* and *Coerba Porto Ricensis* or choice sets with nest. B. S. BOWDISH, San Juan, Puerto Rico.

FOR SALE:—No exchange. The following duplicate sets; prices per set: Am. Eared Grebe 1-3, 12c; Swainson's Hawk 2-3, 30c; Am. Long-eared Owl 1-4, 30c; Desert Sparrow Hawk 1-3, 30c; Spotted Sandpiper 2-4, 15c; Bendire's Thrasher 1-3, 50c; Starling 1-5, 25c; Lapwing 1-4, 25c; Blue-winged Warbler 1-4, \$1.65; Pinon Jay 1-4, 1.70; Large-billed Puffin 1-1, 20c; Lesser Scaup Duck 1-12, \$2.00; Baldpate Duck 1-11, \$2.00; Red-tailed Hawk 1-3, 45c. Will sell the lot for \$8.00. A. M. MACALISTER, Care Mercury office, Guelph, Ontario, Canada.

Have you tried my process of Rapid Taxidermy?

If not you will be gratified by a big surprise. There is money to be made by the preservation of specimens for the market or the school, parlor, office and den. Any boy, girl or sportsman may learn this method at the first attempt, and decorate the trophies and birds of the neighborhood. The cost is next to nothing, and when several go in and work together, there is no cost. You may make money in any town or the country.

On receipt of \$1.00 cash or stamps I will send the complete printed instructions to mount Birds, Mammals, Heads, etc., and one pound of the Preservative, ready prepared for the work; together with complete directions for dressing skins with the hair on, for rugs, robes and hangings, and in addition I will make the extra inducement of offering the formula for making the Preservative Compound, with the privilege of selling the same.

The process will be exchanged for \$3.00 worth of stamps, or for other exchange. What have you to offer? Address

MORRIS GIBBS, M. D., Kalamazoo, Mich.

What Did I Do?

I sent H. W. KERR, Publisher of the NATURALIST, (Farm) and FANCIERS REVIEW \$1.00 for FIVE YEARS subscription and FIVE 25 word Exchange Notices and I recommend it to YOU. Its Natural History Department, edited by Isador S. Trostler of Omaha, Neb. is in need of your Attention, not to say but what the the Belgian Hare, Poultry, Pigeon and Pet Stock Departments are all leaders.

July 1st this offer expires and subscription advanced to 50c per year. Sample copy free. Ad. Rates based on actual issue. Address,

H. W. KERR, Publr., Blencoe, Iowa.

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I have thousands of volumes relating to Natural History. In case I've offered anything during the past year which you can use please favor me with list of wants and allow me to quote "SPEC-IAL" prices. *All must be sold.*

Your attention is particularly called to my Book Lists in the June-July and October (pages 142 143) 1899 OöLOGISTS.

If I've anything left which you want or can use I would be pleased to be informed of the fact and will endeavor to see that the matter of "price" will not be a barrier in making a transfer.

Frank H. Lattin,

Publisher of OöLOGIST, Albion, N. Y.

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GLEN M. HATHORN,

1600 E. Avenue,

Cedar Rapids, Iowa,

for a sample copy. You will never regret it.

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I have them by the thousand and offer below many very rare and desirable titles at prices way below actual value. Of most I have only single sets or copies. All are new or good as new unless otherwise stated. Prices are by mail, express or freight at purchaser's expense—will ship cheapest way. Money returned at my expense if books wanted are sold. Prices good until **June 1, 1900 only**. After that date, write first. *Special discounts on large orders.* Remit in most convenient way. Address plainly and in full.

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Bendire, Life Histories of North American Birds. Rare and almost unobtainable. Only a few vols. on the market at any price. Vol. I, \$9; vol. II, \$7 50, or both vols.	16 00	Maynard, The Butterflies of New England, 4 to 76p, 10 hand col. pl. showing 250 life size specimens, rare, valuable, out of print.	4 75
Brown, Atlas of Fossil Conchology with descriptions and illustrations. 98 full page tinted steel plates containing 3500 figures. Royal 4to. London, 1889. (\$20.00) new.	8 00	Morris, Nest and Eggs of British Birds, 2 vol., 154 colored plates, 1859.	3 90
Chapman, Frank M., A Handbook of the Birds of Eastern North America.	2 35	Mellwrath, Thomas, Birds of Ontario (82) Nature, Vol. XXXI to XXXIV, unbound, cost \$12.	1 40 3 20
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Coues, Field and General Ornithology—A Manual of the Structure and Classification of Birds with Instructions for Collecting and Preserving Specimens, 344p, 112fig.	2 25	Ridgway, Ornithology of Illinois, vol. I, 520p, 33pl., 1889.	2 90
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Davie, Methods in the Art of Taxidermy, (\$10), now out of print and publishers supply exhausted, will soon be very rare.	4 25	Scudder, Tertiary Insects of North America, 4to, 734p, 28pl.	1 90
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Goss, Col. N. S., History of the Birds of Kansas (7.50), new and latest.	4 25	Smithsonian Reports, 43 vols. from 1853 to 1895, inclusive.	20 00
Headley, Structure and Life of Birds, 412p, 78fig, 1895.	1 70	Stegener, Poisonous Snakes of North America, 144p, 19pl, 70fig.	1 35
Ingersoll, E., Birds' Nesting (1.25).	80	Studer's Birds of North America, 200p, 119 col. pl., imp. 4to; full Morocco, (\$45)	13 80
JARDINE'S (Sir William) NATURALISTS Library. Post 8vo. Each volume contains 200 to 350p and about 30 plates engraved on steel and colored from nature, also many wood cuts, original set cost \$50. Have just received a broken set in poor condition, loose in covers &c. Text and plates, however, in clean and fair condition. Edinburgh, 1855-1840. I have:		Vennor, Our Birds of Prey, or the Eagles, Hawks and Owls of Canada, 30 large photograph plates, (\$12.00)	4 40
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THE OÖLOGIST.

VOL. XVII. NO. 6.

ALBION, N. Y., JUNE, 1900.

WHOLE No. 167

THE OÖLOGIST.

A Monthly Publication Devoted to

OÖLOGY, ORNITHOLOGY AND
TAXIDERMY.

FRANK H. LATTIN, Editor and Publisher,
ALBION, N. Y.

Correspondence and items of interest to the student of Birds, their Nests and Eggs, solicited from all.

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Nesting Materials.

Continued from last month.

The Prothonotary Warbler is an exception to the family by building in a cavity in a stump, and generally near or more often over the water. This is a

strange exception, and a radical change from the Warbler ways, but we will find that there are many variations in habit in all the families of birds, and it may be added that these variations lend a charm to the study. There are no humdrum features in the study of nature. There are constant features of change, and surprises await us constantly as we wander on in our researches. Most of the Warblers make their nests of fine materials, grass, rootlets, strippings from wood-stalks and bark, and lining with soft cottony substances. Some, as the Redstart and Blackburnian Warblers construct durable homes in the crotches of trees, the latter sometimes placing its nest as much as fifty feet from the ground. Others, as the Golden-wing Warbler, construct loosely built nests and on or near the ground in shoots or grass. It is almost a rule that these nests which are placed on the ground are poor in comparison with those which are situated in the branches. This is simply a matter of requirement.

Many of the Sparrows employ grass in the construction of their nests and I know several that rarely use anything else. Others, and more particularly the larger ones, use twigs, roots and other materials in combination, as I have found the nest of the Rose-breasted Grosbeak, though this species frequently constructs such a thin affair that the eggs may be seen and counted through the bottom of the nest. The Chipping Sparrow is a well known specialist in its use of the long hair from horse tails, and so well known in this habit that the little bird is called the Hair bird. This Sparrow makes its home near to the abode of man, and thus has the power to gratify its penchant for horse hair, and in all of my trips I have only met

with two nests without the lining of horse hair. These exceptions were lined with very fine rootlets, while the bulk of the nest was built as in other cases. The little bird sometimes makes quite long trips for the lining, and it is an interesting sight to watch one gather and transport a long hair. At times there are as many as seven hairs in the lining of a nest, but again but one or two. But whether there are two or a half dozen, the hairs are always nicely laid in layers about the sides and bottom, and are smoothed and arranged in a manner superior to anything that man could possibly do. Of course this habit of lining the nest with horse hair is an innovation in the bird's methods, for before the introduction of the horse on this continent the Chipping Sparrow depended on other materials. This species, as with nearly, if not all other birds is affected by civilization; and if we study the matter we shall find that civilization produces change in many ways on nearly all birds and mammals.

The Vireos are very interesting in nest construction and the Red-eye is the most pronounced in its predilection for presenting news in the form of bits torn from printed matter. It is not uncommon for the Red-eyed Vireo to attach torn bits of newspaper to the sides of its swaying pensive nest, and these fragments sometimes contain pertinent items of news.

The nests of the Crows and Blue Jays are bulky, compact structures, the latter being lined with fine roots nicely arranged in a smooth wall. That malignant creature, the Shrike or butcher as he is commonly called on account of its habits, which some have been greatly exaggerated, builds a warm and compact nest, lining the same with wool and feathers so that its early brood will not suffer from the cold.

The Chimney Swift constructs its nest entirely of twigs, of very even size as to length and diameter, and glues them

together and to the sides of the chimney, or boards when in a barn, which variation occasionally occurs, or to the interior of hollow trees as they formerly nested, and which is still rarely seen. This glue is supplied by the bird, it being secreted from a gland or glands just inside them out. It is very tenacious in its use as a cement and holds the structure in place with rare exceptions. This glutinous substance is said to be similar to the mucilaginous material secreted by the species known as the edible (bird's nest) Swallow, which is really a Swift, and not a Swallow, we are informed. This material secreted by the Chimney Swift, though small in quantity, is undoubtedly nutritious, but whether it is possessed of the delectable flavor that is found in that of the oriental species has not been determined by any observer in America, or at least not written of.

A little bird, the Prairie Horned Lark, well known to observers, but rarely seen by those who do not study our birds, builds a warm nest in the early spring. And well it may make an effort to keep its eggs warm, as the clutch is frequently deposited before the storms of early April have ceased, and not rarely the nest is surrounded by snow. The nest is composed of roots and grasses and warmly lined. This lining takes the form of wool when the nest is in a field near to a flock of sheep. Again the eggs are protected by a lining of fine weed stalks and hair. But notwithstanding the efforts of the birds, the nest was frequently found to be damp and cold. However, the eggs were warm, kept so by the steady application of the bird's incubating breast.

Among the starlings we find that the preference is for grass in the case of the Meadow Lark and some Orioles and Blackbirds. The Bronzed Grackle varies its nesting habit; generally building a structure resembling the Robin's, but often selecting the hollows in stumps

where more available, which makes the task of rearing the young less difficult. For birds are very thoughtful and are always ready to take advantage of benefits in the way of extra security for their breed. The Meadow Lark builds out in the field among the tussocks of grass, but generally constructs a canopy over the top of its home which helps to conceal the white, pink-spotted eggs. The Bobolink uses grasses and fine roots, and in my estimation conceals its nest more completely than does any other bird which builds on the ground, or near to it.

MORRIS GIBBS, M. D.

Kalamazoo, Mich.

To be continued.

Nests and Eggs.

Birds as a rule are quite constant to their choice of positions for their nests, and rarely change materially from selected sites. But this preference for a particular spot or situation is sometimes varied, and the changes are interesting to note, as it shows the range which a species may take in nesting. One Robin's nest was built in a corn crib; another on the girth of a barn. One nest was found on the top of a stump, two feet above the water of a millpond, and twenty feet or more from shore. Several Robin's nests have been found in hollows of stubs, and one in a side-tracked freight car; still another in a chimney. Several have been discovered on the ground, and one on the cut ends of old corn stalks. These few exceptions may show the wide range that one species may take.

A Chipping Sparrow's nest was taken from the side of a large straw stack, and one season I found a nest on a very peculiar situation. It was perhaps built by the same pair of birds, as it was only a few rods from the old straw stack, and was placed in the upper working gear of a self-binder, housed

in an old shed on the farm, and contained four eggs.

One Chickadee's nest, with eggs was placed on a cross piece in a woodshed nearly in the center of a populous village. This double departure from a standard was remarkable in this little bird.

A Great crested Flycatcher built in the hollow end of a rail on a fence, and a Kingbird nested in a cavity of a stump, only three feet from the ground. A peculiar place for a Phoebe's nest was on the under side of the exposed parts of an overturned tree [not an unusual site in Western New York—Ed.] in a beech and maple woods. Another of the nests of this species was situated under the eaves after the manner of the Eave Swallow; still others were attached to the cavernous interior of a huge sycamore. Of course this last situation was a common one in an early day, but is now rarely seen since the Pewee has adopted the premises of man and selected the sheds and bridges for its nesting sites.

Eave Swallows, as they are now called, formerly built their nests attached to the faces of cliffs, yet now they are rarely found in such a position, and I may say that of all the birds known to me that the Eave Swallow is the most constant to one situation. A remarkable instance truly, where a species has changed its habit so radically. Barn Swallows are not nearly so constant, and sometimes vary their habit by building outside like the Eave or Cliff Swallows.

Chimney Swifts not rarely build in the gables of barns, and still occasionally in the huge hollows of the giant sycamores as they did before the advent of the white man. The Night-hawk, another insect feeder, has modified its habits, and occasionally nests on the gravelled roofs of the city stores. This custom was quite common for several seasons in Kalamazoo. The Wood-

peckers are quite constant, and I do not recall any variation excepting in the case of the common Flicker, which in time of necessity will resort to any cavity in stump or building.

The Warbler family is quite constant, and the only variation, and in no sense remarkable, was when a pair of Yellow Warblers built a nest in a currant bush in a garden far removed from the generally selected quarters, and only one foot from the ground. Neither do the vireos vary in situation to any degree, yet I have found the nests of both the Yellow-throated and Red-eyed at heights of from two to forty-five feet from the ground.

A Song Sparrow's nest fifteen feet up, and a Dickcissel's structure over twenty, are instances showing how generally low builders will take a rise. A Towhee has been known to build in a bush, and as this case, as well as the one with the Song Sparrow were late dates, it has occurred to me that the birds might have been robbed the first attempt, and so tried more elevated quarters for the second trial. When we consider that more than one third of the birds of America nest on the ground or just above it, it seems astonishing that the birds maintain their position as well as they do. It is not rare to find the structures of ground nesters built in bushes in the latter part of the nesting season, and I cannot but think that these variations are the result of disturbances in the earlier attempts at nesting.

In a suitable spot for Red-wing black-birds and where there was not an abundance of rushes, the birds built in a lot of cut brush and seemed contented. In new land the Bronzed Grackles adopt hollows in dead trees for nesting situations, and I have found scores of eggs in bare hollows as well as nests built in the hollows, and not a nest built in the regulation manner as usually seen with these birds. A Grass-

finch's nest interwoven with the tops of some vigorous red clover, and about a foot up was a curiosity to me.

Another ground-bird, the Spotted Sandpiper, distinguished itself by building on a log. A nest of a Ruffed Grouse was built upon a stump, while a Mourning Dove chose some roots beneath the margin of a gravelly bank. Doctor H. A. Atkins found a nest of a Sandhill Crane which was built on a support for hay in a marsh. A Mallard's nest containing eleven eggs was built in a hollow of a stub and ten feet up and out in a lake twelve feet from shore.

There is but slight variation in the situations chosen by the birds of prey, and of all that I have studied the only one which varies to any extent, is the Great Horned owl. This species nests in the hollows of trees about half the time, and again in the old nests of the Crow or Buzzard Hawk.

Some birds will accept almost any kind of a situation for a nest and the common House Wren will take possession of any cavity that suits its fancy. In that very artistic and correspondingly accurate book "With Nature and a Camera," there are several peculiar instances of odd situations of nests, together with most interesting illustrations. It appears that the Robin Red-breast of England, though a different species from ours is like it in its varied choice of nesting sites.

All birds protect their eggs and young from cold and wet, and I have observed the mother bird covering her brood during a storm. At these times the wings are spread out and the rain is kept off to the best of a bird's ability. However, it is very often a vain attempt and it must be recorded that Nature's act often proves more disastrous than the combined forces of man, together with the many other untoward effects. Storms are very destructive to bird life in the months of May, June and July, and especially so in June, when there

are so many young birds in the nests. Some birds, as the Woodpeckers, and others which wisely build in cavities, are practically free from wind and rain, and to an extent from cold; still, this habit does not seem to secure greater protection to the cavity builders in the long run, as the Woodpeckers do not hold their own any better than the Robin and some others which build exposed nests.

Not only is the effect of a long continued, or heavy rain very severe on the young; tens of thousands being drowned or chilled to death, but an almost equally destructive measure lies in the visitation of a severe wind. In these cases the birds hatched on the ground have a better chance for their lives than the species which are partial to tree habitations. Hawks and owls, and all other large birds are but little affected by the wind as they seem to be able to withstand the effects. But it is not so with many small birds, and many young and eggs are rolled from the nests in each severe wind storm. There are many birds which build but little better than platforms for their nests, and the eggs and young are often shaken from the nearly level structures. I could mention several species which meet with disaster from the wind, but will speak of but one. The small Green-crested Flycatcher constructs a very slightly hollowed nest, and in addition to this apparent lack in judgement, it also selects the extremities of long branches for the attachment of its house. It is not surprising that the eggs and young are made the sport of the winds.

[To be continued.]

Montana Magpies.

As several seasons have passed since I did anything in the way of collecting, it has not been my fortune to appear as a contributor to the columns of the

OOLOGIST in recent times. This season, however, finds me frequently afield in the wilds of central Montana, and though no rare species have added their treasures to my modest cabinet, a few notes concerning our common Montana birds may be of interest. We collectors generally make mistakes in withholding our notes regarding common birds, thinking them of little value, and hence many facts upon migration, nesting dates, and other ornithological data, which might be available for another's use, never see the light. This article, therefore, does not aim to add largely to the body of information relative to the habits of so familiar a species as the American Magpie, *Pica pica hudsonica*, but rather to furnish data from from this region, where collectors seem to be few and far between.

Spring opened unusually early in this region, fully a month earlier than last season. Few traces of vernal vegetation were noticeable here in '99 before the middle of June; at the date of this writing, May 12th, spring has been reigning for several weeks, the trees and bushes are robed in green, and blossoms scent the air. Early in April the songs of Western Meadowlarks and Mountain Song Sparrows began to render the air vocal with melody, and it is needless to say that such attractions were too powerful to fail in drawing me afield.

My first set of Magpie's eggs was taken on April 21. Other nests contained incomplete sets, which were not disturbed, but as this set was found at the close of an afternoon's tiresome tramp, and a period of rainy weather was threatening, the eight eggs were transferred to my collecting box. The nests in this locality are all found in dry, bushy ravines or "coulees" opening upon the small water-courses. About a mile and a half from my home is a slaughter house, and within a half mile of this attractive center were from

eight to ten pairs of nesting Magpies. All the nests I have examined were in haw trees, with one exception, which was in a low willow.

The nest which furnished the set of eight eggs was exceptional in its unusual size. Its base was nine feet from the ground and was formed of a mass of stout twigs, within which was a basin-shaped layer of reddish clay, somewhat mingled with the twigs. The clay layer was about an inch in thickness. A foot ruler, placed over the clay basin, easily rested within the brim in any direction, showing an unusual measurement in Magpie nests, if it could be removed without destroying its form, would with difficulty be contained in a clothes basket of average size. In the clay basin was an inner nest, formed of coarse rootlets and a few horsehairs, the cavity being six inches across and two inches deep, remarkable in its shallowness. The inner portion of the Magpie's nest bears a general resemblance to the nest of the Brown Thrasher, and if placed alone in a hedge on a base of small twigs the similarity to the Brown Thrasher's nest would be striking. Extending upward on all sides from the twigs, around the clay basin was a loose lattice-work of twigs, and over the whole affair was a thick canopy of twigs. There was no noticeable opening for entrance or exit, though in several places the lattice-work was open enough to admit the owners. The space within the latticed sides of this nest was large enough to allow the bird to turn without injury to its long tail feathers, this being the only nest I have examined thus roomy. The nest was started in crotches, and extended to all available supports within a foot or two of it. One branch of the main stem ascended obliquely through the space enclosed by the lattice-work of the nest. Most of the eight eggs showed a trace of incubation. During the examination

of the nest the owners flew about in the adjacent trees, uttering harsh chattering cries.

On April 23rd, while prowling about in a drizzling rain, I found a Magpie's nest in a coulee within one hundred yards of the slaughter-house. One of the birds was on the nest, from which I could see her tail projecting between the latticed side as I drew near the structure. As I straightened up under the tree, she flew out with loud chatter, which she kept up while I remained near. There were only three eggs in this nest, so I left them undisturbed and made it a second visit on April 30, expecting to find eight or nine eggs, but found only six eggs in the complement, incubation begun. The base of this nest was seven feet from the ground, where it was placed among upright haw stems, having the usual basin of reddish clay worked among the basal twigs. The basin was nine inches from brim to brim. The inner nest was nearly seven inches across, and nearly four inches deep. This nest had a roundish opening on one side, not leading directly into the nest, but entering the thick lattice-work obliquely, and leading along the brim. Even by the use of this door, though, the bird would generally turn around upon the nest, as she was setting facing the door on both occasions when I approached. It does not appear that the birds use one opening regularly for entrance and an opposite one for exit, for in all instances where I have found regular openings, the same one was used for both entrance and exit.

The second complete set I found consisted of nine eggs, incubation well begun, April 25th. The base of this nest was ten and a half feet from the ground, in a haw ticket. The lower portion of the structure was unusually deep. This nest was also much narrower than other nests examined, the latticed sides rising almost upon the brim of the clay basin,

which was well mixed with the supporting twigs. No regular opening for entrance was noticed. The inner nest was made entirely of rootlets.

The third complete set, consisting of nine eggs, incubation begun, was taken on April 27th. The base of this nest was 10 feet from the ground. Like others described, it was in a haw tree, with thick canopy and loosely latticed sides. The inner part was three inches in diameter and five inches deep, made of rootlets and horsehair, the foundation being made in the usual style of Magpie architecture. The female, presumably, was on the nest when I approached it, and remained until I started to climb to an old nest in an adjacent tree, when she flew out with a loud chatter. While I was examining the nest, the other bird, which I took for the male, alighted near the nest with a large grub or caterpillar in his bill; but seeing the situation, he gulped down the morsel and joined his protests to those of his mate.

In the same coulee, on the same afternoon, I found a nest containing seven eggs. Not being able to see the contents of this nest fully on account of its depth and the thickness of the surrounding sides, I mistook the number for a larger complement, and began to remove them. I took out three without mishap, but broke the fourth egg on a protruding thorn. It was quite fresh, and feeling the three eggs remaining, I concluded that the set was incomplete, and returned the three I had removed to the nest. I had some doubt as to the result, but visited the nest on May 2nd, finding the pair of Magpies in contented enjoyment of the six eggs, no more having been added to the seven originally found.

On April 27th, I also found an incomplete set of two eggs. Re-visiting the place on May 5th, I found only six eggs, incubation well begun. My son, who accompanied me on this expedition, was

entrusted with the care of this set; but in descending a juniper-carpeted slope, he slipped several feet, and three eggs survived the mishap. The set is mentioned to show the size of the complement. There was nothing unusual in the nest or its situation.

On May 8th, I took a set of seven eggs well advanced in incubation, from a low willow in a coulee frequented by cattle. The nest was within plain view of a bridge crossing the coulee, the base being ten feet from the ground. It was a well-built affair, though made in the prevailing style. This nest had two openings in the latticed sides, though not directly opposite, and the tail of the setting bird was not protruding from one as I approached, for it showed plainly at a place about midway between the openings. As she frequently alighted near with loud chatter while her home was being despoiled. I noticed that her tail was badly frayed along the sides. This set of eggs was the finest I had taken, being short and thick, having a greenish-gray ground, heavily blotched with dark markings, and brightly polished surfaces, the latter being lacking in other sets mentioned.

Re-visiting the first nest, mentioned under date of April 21st, I found a set of seven eggs on May 9th, incubation begun. I can not say whether these belonged to the pair which had first used the nest, but mention the fact of the nest's being occupied the second time, which I find not unusual. However, I have not found any instances of nests of the preceding year being used by the Magpies.

It would be interesting in this connection to note characteristic traits in the behavior of the Magpies, but this article has already exceeded its intended length; and craving the obliging editor's pardon for taking such undue liberty, we leave the Magpies until another season.

P. M. SILLOWAY,
Lewiston, Mont.

Four Interesting Warblers.

BLACK AND WHITE WARBLER. *Mniotilta varia*:—I know of but two instances of this Warbler breeding in Livermore, both nests being found by the writer, one nest contained five eggs the other four. The first nest was situated at the edge of a woods in the dirt and roots of an uprooted tree, the other was in the deep woods, built in a rotten hemlock stump. The nests were composed of dead leaves and bark strips and lined with hair and hair-like roots. Eggs white, wreathed around the large end with chestnut and hazel. This bird is mentioned as a common breeder in this locality and is seen quite abundantly here, but I have been unable to find but two nests and have searched for them for years, so have come to the conclusion that it does not breed nearly so abundantly as

MYRTLE WARBLER. *Dendroica coronata*:—This Warbler has been found breeding quite abundantly in Livermore, by the writer and others in the month of May and June and first half of July. Its nest being built in a thick growth of small pines. I have never found them built in any other coniferous growth. The height from the ground ranges from five to fifteen feet. The nests were all built in upright branches, running out from the main body of the tree and were composed of fine hemlock twigs and dead grasses and lined with fine grass and a few hairs, have found several nests warmly lined with feathers of the Ruffed Grouse. The eggs in all of the nests that I have examined were four in number, never more or less, and in color were creamy white, spotted and speckled with brown and lilac and a few dots of black, thickest near the large end in the form of a wreath. This species although more common than the Black and White Warbler in this locality, is not nearly so abundant a breeder as

MAGNOLIA WARBLER. *Dendroica maculosa*:—This species has been found breeding abundantly in the coniferous growths of Livermore, nesting in spruce, fir and hemlock, at a height of from three to eight feet from the ground. In nearly all the nests I have examined the number of eggs were four, have found only one set of five, but in a few instances there was but three of the Warbler and one of that pest, the Cowbird. I sometimes think that the Cowbird throws out one of the Warbler's eggs, to make room for her own. The nest of this Warbler is composed of twigs of the hemlock, dead grass and weeds, and lined with black hair-like roots. The nest is loosely made. The eggs are white spotted and speckled with lilac, lavender and brownish black, thickest around the large end. The Magnolia Warbler, although a more abundant breeder than the Black and White or Myrtle, does not breed so abundantly in this locality as

CHESTNUT-SIDED WARBLER. *Dendroica pensylvanica*:—This little Warbler is a very common breeder in Livermore, nearly every bushy pasture contains nests of this species, built in low hazels and other bushes, from two to five feet above the ground, nests most abundantly in June, many nests are found that contain eggs of the Cowbird. The nest of this Warbler is composed of bark strips, dead grasses and plant-down and lined with fine dead grasses and horse hair. All nests I have examined were very loosely constructed, nearly all the nests contained four eggs never more, a few only three, color white, speckled and spotted with chestnut brownish and lilac, which forms a wreath around the large end the rest of the egg is sparingly dotted.

In concluding this paper will say if it is accepted by the Editor and readers of the Oölogist, that in some future issue I will write my experience with four more interesting birds of this family: The Black-throated Green Warbler, Oven Bird, Maryland Yellowthroat and American Redstart.

GUY H. BRIGGS,
Livermore, Maine.

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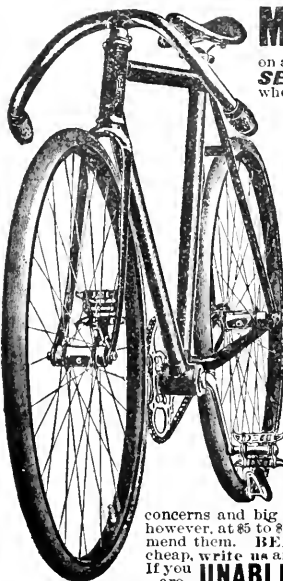
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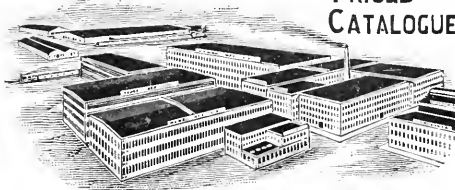
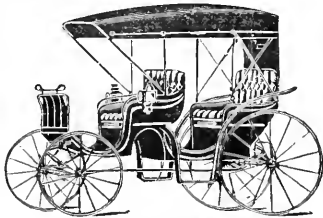
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A MONTHLY PUBLICATION DEVOTED TO
OOLOGY, ORNITHOLOGY AND TAXIDERMY.

VOL. XVII. NO. 7. ALBION, N. Y., JULY-AUGUST, 1900. WHOLE No. 168

Wants, Exchanges, and For Sales.

Brief special announcements, "Wants," "Exchanges" "For Sales," inserted in this department for 25c per 25 words. Notices over 25 words, charged at the rate of one-half cent per each additional word. No notice inserted for less than 25c. Terms, cash with order.

Strictly First-class specimens will be accepted in payment at one-third list rates.

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Examine the number following your name on the wrapper of this month's OÖLOGIST. It denotes when your subscription expired or will expire.

No. 168 your subscription expires with this issue

170	"	"	"	Sept. 1900
173	"	"	"	Dec. "
175	"	"	"	Feb., 1901
180	"	"	"	July, "

Intermediate numbers can easily be determined. If we have you credited wrong we wish to rectify.

LOOK HERE! I have these A1 sets, with full datas to exchange, mostly personally collected. A. O. U. Nos. 273 4-4, 316 4-2, 331 1-2 1-5, 333 2-4, 337 1-3, 342 1-1 1-3, 388 2-2, 406 1-4, 428 n-1 2n-2, 444 5-4, 456 2-4, 461 1 2 5-3, 466a 2-4, 467 18-4, 477 3-4, 488 1-4 5-5, 475 20 eggs, 498 4-4, 501 1-5 2-6, 507 1-3, 511 1-1, 1-4, 529 1-5, 540 2 3 6-4, 560 1-3, 561 3-3 6-4, 598 1-1 1-3, 612 1-5, 613 3-4 1-6, 614 3-5 1-6, 622a 1-6, 622b 1-4, 624 3 3 1-4, 627 1-2 1-4, 633 1-4, 652 8-4 5-5, 681 5-5, 683 1-4, 687 3-3 2-4, 704 3-4, 705 1-3 1-4, 710 1-2, 724 1-7, 761 1-4. I want medium rare sets of Flycatchers, Sparrows, Vireos, Warblers, Wrens, Thrashers and Thrushes. All lists containing sets I desire will be promptly answered. EDW. W. SPRINGER, Owatonna, Minn.

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THE OÖLOGIST.

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THE OÖLOGIST.

A Monthly Publication Devoted to

OÖLOGY, ORNITHOLOGY AND
TAXIDERMY.

FRANK H. LATTIN, Editor and Publisher,
ALBION, N. Y.

Correspondence and Items of Interest to the student of Birds, their Nests and Eggs, solicited from all.

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Nests and Eggs.

All species of birds, so far as I am aware, are governed by their requirements in the line of timber for the nests, in selecting their nesting quarters. This is noticable in many cases. For instance, a few pairs of Eave Swallows built each season about half a mile

from a small pond. But in time the pond dried up, and the Swallows left the barn eaves and have never returned; for an Eave Swallow must have mud for its nest, and there is apparently nothing which will take its place. Some birds will make a shift in certain cases of necessity. Chimney Swifts, as a rule, use a regular sized twig for nest construction, but in an instance which came under my notice a pair had to make use of the very fine and irregular twigs from the raspberry vines or bushes. They make a peculiar looking nest, and the Swifts may have thought it odd, but they preferred this timber to travelling farther. Robins may build in any quarter where there is mud to be found, and the situations are various. It is not uncommon that in late April or early May there is a dry time in the land. Only lasting for a week or so, yet it is sufficient to stop the nest building of the Robins, and to keep them at a stand-still for the time being. I have seen a pair of Robins start a nest and the dry weather would come on and stop operations, and the pair would wait about for the rain so they could find the mortar. On one occasion we furnished mortar by letting the hydrant run on the ground. The delighted Robins immediately accepted the situation and gathered materials for the partially finished nest which was quickly completed, and the eggs duly deposited.

Many birds ornament their nests, evidently with design, for though the birds of a species usually follow a set style, it is nevertheless a principal of ornamentation. The Hummers are well known as dainty designers, and our little Ruby-throat is the maker of one of the most beautiful little structures in the world. Composed of deli-

cate cottony substances, and of the lightest materials possible, it is covered on the outside with delicate bits of lichens, which are caused to adhere to the little home by the use of spider's web. The Blue-gray Gnatcatcher constructs an equally well finished home, and though not considered equally fine with the Hummer's nest because of its larger size, is in reality fully as well made. The Wood Pewee also makes a finely covered nest of lichens. Another decorator in lichens is the Yellow-throated Vireo, which constructs its pensile nest at the end of a branch, and not on the upper side of the limb as with the Hummer and Gnatcatcher. These four species are the only ones which habitually cover the nests with lichens, but all of the Vireos of my acquaintance have the tendency to ornament the exterior with various substances, and the Red-eye in particular is given to this agreeable display of artistic taste. Very often the Red-eyed Vireo will attach pieces of printed newspaper to the sides of the nest, giving it a decidedly neat and peculiar appearance. The paper is not tacked on in great pieces, but is torn into fragments and gracefully draped about the nest. Very often the bits of paper contain words and even short sentences quite pertinent, and sometimes these finds are kept as curiosities.

Then there are some species of birds which are given to decorating their nests, that is in the eyes of outsiders, but who really follow the habit for other purposes. For instance, the ducks follow the practice of stripping the down from the breast and covering the eggs in the nest. It is not known why this brown down is used. Some theorizers claim that it is to keep the eggs warm during the absence of the parent, others say that it is for the purpose of concealing the eggs, while many think it answers a double purpose. The habit, common to all nest-

ing ducks, I am informed, is probably for the concealment of the eggs, for it is not reasonable to suppose that this is a necessity so far as keeping the eggs warm is concerned in a section as far south as the 42nd parallel, and yet the habit is followed in the United States as well as in Greenland. There are many points in the natural history of our birds which we have not as yet fully fathomed. In taking up the point of concealment, we find that there are many other species of birds besides the ducks that follow the practice of concealing the eggs when the nest is left alone. One class, the divers, is partially given to this habit of concealing the eggs when they are left, and no other bird more thoroughly conceals the eggs than does the common grebe of hell-diver, as it is called. Yet the Great northern diver, a very sly and sagacious bird, does not make any attempt to conceal its eggs. The grebe does not place down upon its eggs but simply pulls a mass of rubbish, moss and grass and dead reeds over the eggs when they are left, removing the covering when the nest is again returned to. The duck's eggs are probably covered with the down, even when the bird is on the nest; at least on the instant when the old bird leaves the nest the eggs are found to be fully covered. Once when I came close to a nest, and when the setter did not know of my presence, the eggs were found completely covered when the female hastily left. I have not yet learned of any of the perching birds which cover their eggs.

All birds have a system or arrangement in the deposition of the set of eggs in the nest, and there are very few species, if any, in which some peculiarity is not to be found if careful observation is made. Many birds so plainly and invariably show this tendency to a set arrangement that the habit is well known to all observers. It is of these

well known examples that we will speak. The Loon or Great northern diver always deposits two eggs of an almost perfectly elliptical shape, which lie side by side and at about three-fifths of the length of the trough-like depression from the front of the nest. From the position of the eggs an observer may tell the position of the bird on the nest, as the setter is long bodied and the abdomen is well back from a center. This arrangement is verified by watching the birds on the eggs. The turtle dove, nighthawk, and whip-poor-will each lay two egg which are placed side by side.

The Spotted Sandpiper and Killdeer plover, and I presume all of the shore birds, at least so far as I know, lay four eggs at a clutch, and arrange them in the nest or on the bare ground with their small ends together, and as they pyriform they join in to perfection. The eggs of all snipes and plovers are proportionately exceeding large compared to the size of the bird, and the saving of space by this arrangement undoubtedly answers a purpose. It is impossible to offer a solution to this problem of order, unless we suggest that it is a wise provision of a power which ordains the arrangement which best admits of the bird's covering the eggs thoroughly. It is fair to doubt if the sandpiper could cover her four large eggs if they were arranged in any other position. The shore birds are not provided with a plenty of fluffy feathers like the grouse and bob-white which lay many eggs at a clutch. If this arrangement of the set is broken and the eggs changed about, it will usually be found that the birds will rearrange the clutch, showing conclusively that the birds reason in regard to the position which will give the setter the best chance to cover the four eggs, I have disarranged the set, turning the smaller ends out, and have almost invariably found that the set would be rearranged in the course of a day.

Continued.

The Bartramian Sandpiper.

The Upland or Field Plover is known as the most elevated species of the family in its selection of nesting quarters. It is rare to note this bird in the sections selected by others of the snipes, sandpipers, and plovers, and it is very unusual to meet with it at any time along the lake shores or streams, as it prefers uplands and I have knowledge of its nesting on the highest land between Chicago and Detroit. Upland, therefore, applies well to the species, as it is often, nay, usually found nesting at quite a distance from a lake or stream. This habit is observable in the region of the Great Lakes, and it is said to be more noticable in the west.

The names—snipe, sandpiper, plover and others applying to the shore birds, are quite often indiscriminately used for the same bird, and are used as the terms finch, linnet and sparrow are for the small seed-eating birds. Still, there is a distinction among the shore-birds, and the name plover does not apply to this species, as it is not a plover in any sense; not belonging to that family. But usage is hard to combat, and this bird will always be known as a plover. In the west where creatures quite often receive unusual and startling names, this snipe is known as grass plover, prairie snipe, prairie pigeon, probably in allusion to some note resemblance, and at Manitoba is known commonly as "Quaily." The A. O. U. name, Bartramian Sandpiper is a good one; it was given in honor of the renowned Professor Bartram in the early part of this century.

The Field Plover arrives in Michigan in middle April or a little earlier, but is not seen in any numbers until after the 20th, of the month. Some morning, when we are out for snipe, provided you are an advocate of spring shooting, we may hear a peculiar note or series of twitterings. These are pleas-

ing to the ear, and the amateur cannot fail to notice them from their very oddity. The sounds at times, fall to us in the balmy spring air like the love song of the common tree toad, and on several occasions I have been deceived. On one occasion, long ago, I even went so far as to hitch my horse to the fence, and enter the field with my gun for the birds, only to find that I had been fooled by several musical tree toads. It is very easy to distinguish the notes if both creatures sing at once, as I have proven but this only makes it the more remarkable that a person can be deceived.

Besides this series of notes we often hear a pleasing warble, like *putt putt putt er-r-r-r-r putt er-r-r*, and looking up see a bird flying about apparently aimlessly, at a great height. Occasionally a long drawn *wee hee-u-u-u* is strained forth, and this last effort is probably its love song, as it is uttered in the spring when mating and the other notes are emitted at various seasons as well.

This species often flies at an immense height, and I have seen them fluttering when almost out of sight, and when their notes could scarcely be distinguished. The flight is very vigorous and rapid when the plover attempts it, but generally when undisturbed the movements are exceedingly varied. Sometimes the pair will sweep along at a great rate; flying low over the meadows. Then again the birds seem to flutter about in a very lazy manner, seeming to enjoy themselves in perfect abandon.

In some of their movements these plovers remind me of the actions of the sandhill crane. Sometime in May the pair makes selection of their summer home, and during the month deposit four pyriform eggs in a very shiftless inartistic nest on the ground, after the manner of most of the birds of this family. The structure is composed of a little grass and in situations far removed from water in most instance. The

eggs are speckled with brownish on a light buff, and are nearly always found with their smaller ends together for convenience of the setter.

Although the eggs are not concealed in any way, still it is a difficult matter to find them, even when one knows the part of the field in which the birds are nesting. The surest way to find the nest is to observe the movements of the birds. But even this is not always easy for the old bird is ever alert, and after you have seen the shy bird alight and disappear, you will frequently find that the sly creature will sneak from the nest through the grass when you approach the situation. When there are young on the ground the old birds will try the allurements of this kind of birds, and attempt to lead you from the situation by feigning lameness.

There are many species of birds in America which are not included in the arbitrary list called game birds, and yet are held in high esteem by the shooting fraternity. It is hard'y fair to give the woodcock and jack snipe a higher position in the scale of the gunner's estimation simply because they lie well to the dog, while many others of this and other families will not do so. The list of game birds, as well as fishes is simply an arbitrary one, and we are at liberty to make a list to suit the fancy of each hunter.

The Field Plover, according to my observation of more than a quarter of a century, is one of the most alert and wary snipes that we have; and anyone who proves himself capable of stalking the birds in their selected quarters, gives evidence of possessing the prowess of an educated nimrod. Because of its scarcity, and as well from its elusive ways, it is but little, or not at all known to the gunner who habitually hunts with a dog, for that class of men rarely comes in contact with it, as we know that the gunner who hunts with a dog are not generally shooters. Nevertheless, there

is as much skill required to successfully hunt the Bartramian Sandpiper successfully as was ever required to take the snipe, bob white or woodcock. Yes—and far more, for the patience required is out of all proportion to the chances of a decent-sized bag.

September is the best month to hunt this lively bird, although in many quarters where unprotected, the birds are gathered in in August, and even in July and when the immatures are often too young to fully care for themselves. The Upland Plover is found over a wide range of country and has been found breeding from the East to Alaska. It is rare west of the Rockies, and is becoming scarce in the east, where a gunner thinks himself in good luck if he bags two or three on a trip. I have hunted this bird in Massachusetts, Michigan and Illinois, and have found it the same elusive, active bird in all sections. Where it is hunted in the East with decoys it is not a grand success, and while there are about a score of other shorebirds, large and small, which are lured, this plover is not commonly called in on account of its shrewdness and penetration.

Such a thing as a potshot is not known and the chances are even against getting a good single, for the birds are scary and rarely give a better show than at fifty yards. Adding to this that they are vigorous flyers and are capable of carrying off a good sized load apparently, and it will be seen that the Upland Plover or snipe is a difficult bird to capture.

As a table bird, there are none better, and the delicacy of a bird of the season shot in the autumn is equal to that of anything placed before the banqueter. But let me add, that they should never be hunted in the spring, both from the fact that they lack the layer of fat which adds so largely to the flavor, and as well, it is not consistent to shoot in the spring under any conditions.

MORRIS GIBBS, M. D.,
Kalamazoo, Mich.

A Story of My Life;

By *Chondestes grammacus strigatus*.

WM. L. ATKINSON, SANTA CLARA, CAL.

In the following story I shall endeavor to record a true history of my life which has been one of trials and tribulations as I think one will admit after having read it.

My true name is *Chondestes grammacus strigatus* but I am perhaps better known to the inhabitants of this large world as Western Lark Sparrow. I first saw the light of day in a nest on the ground in a large meadow in that beautiful country of California where I was hatched and reared with a brother and two sisters. Those were indeed happy days! My father sitting on a small bush near our home would favor us with many beautiful songs while my mother fed us with the grain, worms and insects which made up our usual meal.

When we were able to fly and to partly look after our own well being a happy party we were, flitting around through the hedges and meadows adjacent to our home, our ever watchful parents warning us of approaching enemies in time for us to make our escape. Here, however, my first great calamity befell me. One day we were all feeding along a roadside when a boy with a long destroyer which made a great noise killed my father, brother and sisters, and injured my mother so severely that she could not fly and was captured and killed by a dog. I was also wounded, being shot in the leg, and although I escaped and soon recovered sufficiently to walk, I have never regained full use of that leg.

After the loss of my family I was very lonesome and wished a great many times that I had been destroyed with them. However, I soon fell in with a family party of relatives, *Spizella socialis*, and when I had told them my troubles they invited me to join them,

which I very gladly did. A short time after I joined them it began to grow cold so we all decided to leave our present abiding places and go in search of a warmer clime. We traveled many days in a southerly direction, over broad rivers, green fields and large forests, until we at length arrived in a beautiful country of large orange groves where the air was ever warm and pleasant. As there was a great variety of food here, we decided to remain for an indefinite period. At this time I had a dispute with one of the sons of Mr. *Spizella socialis* and as the whole family took sides with him I decided to leave them.

After I left their company I wandered around, meeting many of my relatives, but was not content to abide long with any of them until I met a gentleman who bore the same name that I did and who informed me that he was my uncle. He was very glad to see me and invited me to join his family, which consisted of his wife, one son and two daughters. His daughters were very beautiful, the younger one especially, and I immediately fell in love with her. The days passed very pleasantly now and very rapidly also.

I had but one serious adventure, of which time I narrowly escaped being caught and devoured by a cat. The time was now approaching when I felt inclined to return to my old home, and as I disliked to travel alone, I asked and received permission of my uncle to take his youngest daughter with me.

We were duly married, and after receiving some good advice from the old folks, set out upon our journey. I was so happy I could not refrain from singing nearly all the time, and my wife was good enough to tell me that I sang very well, almost as well, in fact as her father. This made me feel quite flattered; for her father was a vocalist of repute. After traveling leisurely northward for a time we came

to a beautiful valley which was covered with fruit trees, at this time in full bloom, and their fragrant and beautiful blossoms made one think of Paradise. I was told that one of these orchards was owned by a friend of the birds, called an Ornithologist, so we travelled until we found it. In this orchard many birds were nesting, and as they told me he never allowed their nests to be disturbed, we decided to remain here and build our summer home. The only difficulty was that there were no bunches of grass growing in the orchard and the traditions of our family tell us that we should always build our nest on the ground under a bunch of grass or weed.

However, we decided at last to build in the first forks of a large prune tree about one foot and a half above the ground, and so began building our home on the 16th of April, 1899, of twigs, straw and rootlets. The interior we lined with soft fine grass and hair. By working hard we had our nest ready for the eggs nine days after we started it, and five days later found my mate sitting upon five beautiful eggs, four of which were hatched twelve days later, or upon the 8th of May. My happiness was then complete, but it was soon to be turned to sorrow, for when our babies were but two days old two terrible dogs tore down our home and devoured them, although we tried in every manner possible to prevent them from doing so.

After we had somewhat recovered from the shock occasioned by this terrible loss we decided to build again, this time selecting a fork in a prune tree two and one-half feet up, in which we built our nest and which in due time held three eggs, they being hatched upon the 5th day of June. We thought we had placed our home high enough up in the tree to be secure, but in this we were mistaken, for upon the 8th of June, our home was destroyed

and our babies devoured by the same arch-criminals who had murdered our other family. After this last sad experience, my mate became sick and never rallied, dying of a broken heart ten days after her babies were destroyed. Soon after her death, I left the scene of my many troubles for the beautiful southland, where I am at this time wandering around in a state of loneliness bordering upon despair, and waiting the welcome time when I shall join my wife and family in our future home.

Hawk Notes—Oological—1899.

MARSH HAWK. May 19th was the day I had appointed for exploring a marsh where I expected to find nests of the above named species. After some time I finally flushed a female Hawk off her nest, out of a clump of small willows where the water was several inches deep. The nest contained only two eggs, desiring full and complete sets only, I moved on, as a full clutch generally contains five eggs and an egg being deposited every alternate day. I calculated the set would be complete about the 25th. My time being limited I soon turned homeward without any further find of interest.

Next day, this being the 20th, I set out in another direction for sets of the same species, found a nest on a piece of wild rough upland right in a clump of small willows, but this contained only one egg. Again I made a hasty calculation and set the day to return on the 27th. Making a few notes in my book, I moved on, found a nest of Cooper's Hawk, but that will come under its own heading.

Well on the 25th according to figuration I visited nest No. 1 and found Madam Hawk at home. After coming within five yards of the nest she flew up revealing five bluish-white eggs, no markings whatever upon them. Nest situated in several inches of water sur-

rounded with small willow bushes. Composed of sticks coarse weed stalks, brier stems, etc. on top of which was a quantity of grass. Nest measured 16 inches across with a depression of 2½ inches.

The 27th following was the day set for collecting set No. 2, but something unexpectedly turned up and I was delayed until the 30th. On which day I might have been seen making tracks for the Hawk's nest.

When I came to within ten rods of the nest, the male came to meet me circling and crying overhead. As I drew nearer he would now and then swoop down at me with loud cries as if to drive me away. The female soon flew off the nest, I suppose she knew by his cries of alarm that something awful was coming. She now joined her mate and the two came at me with renewed force, they would swoop and dive unpleasantly close to my head while I was examining the nest.

This also held five eggs; hastily packing them securely and taking all necessary notes I took my departure as quick as possible. This nest was constructed of brier and weed stalks, coarse grass and roots, on top of which was an abundance of dry grass. In color the eggs are white with a tinge of blue and very faintly marked with light brown spots and stripes detected only on close examination.

The eggs of this species have frequently been described, with markings of different colors upon them. I have collected in this region for the last six or seven years and have examined upwards of a dozen sets from this locality and the last described set is the only one, that was marked in any way, and that is very faint. From four to six eggs is the complement, five, however, is the general rule, while four or six are only occasional.

333 COOPER'S HAWK. On May 20th after finding the second nest of the

Marsh Hawk, I soon entered a medium sized grove of about sixty acres. As I was wandering aimlessly about not caring particularly where I went I soon found myself confronted by a barbed-wire fence, looking up suddenly I got a faint glimpse of a dark object in the tree tops not far away. Stepping over the fence, I hurried rapidly on in that direction until I could see the nest plainly. At first I thought it was an old Crow's nest, but it looked suspicious. All this time I was looking up, but could see nothing on the nest in the form of a bird. I'll just go round to the other side I thought. There was considerable undergrowth about the tree on this side, so I made a small circuit and on coming up on the opposite side I saw what appeared to be a gray tail protruding over the nest and knew instantly I had found something of more interest than a Crow's nest. Going up to the tree as there was no brush on this side I rapped on the trunk with a stick I had picked up for that purpose immediately a Hawk of some species rose off the nest and sailed away. I being under the branches could not see the bird very distinctly so was unable to name it.

Not knowing what species it was I resolved to await her return, so going a little ways off I sat down on the ground. I had not long to wait, however, before she was circling over the tree-tops. Her keen eyes must have observed me, although I sat perfectly quiet, for she did not alight on the nest, but came very close. Being satisfied that the bird was Cooper's Hawk. I arose and went to the tree, as the nest was only thirty feet from the ground I was soon looking in it. When I saw its four white eggs with a faint tinge of blue there was left no doubt as to the identity.

Being in a very uncomfortable position I soon descended bringing the four freshly laid eggs with me. Following

is a description of the nest as then taken. Outside and general appearance as a Crow's nest, situated in the main fork of a black oak tree, thirty feet from the ground.

Composed of medium sized sticks externally, over which were placed finer ones, bark, grass, leaves, etc. Two eggs have very faint markings of light brown upon them, not hardly noticeable.

337 RED TAILED HAWK. Of this species two sets were collected. The first nest being placed in the topmost branches of a burr oak tree, which showed little or no attempt at concealment and was probable the accumulation of many years.

From March 22nd to the 30th the Red-tails were seen repairing the old nest. So on April 3rd a party consisting of a neighbor, my two brothers and myself set out after "big game" as one of the party termed it. After a pleasant walk in the fresh morning air we arrived on the field of action.

The nest was easily seen at a distance of half a mile as the nest tree was one of the outermost ones, but we did not see any Hawks near. When we came up to the nest we first realized its dizzy height and the dangerous position it was placed in, for the top of the tree was greatly inclined.

After some discussion I was finally elected to do the climbing and the contents of the nest were to be mine for the undertaking (that is if the nest contained any eggs) At first I hesitated but as the morning was fair and there was no wind I thought I might possibly make it, so at length said, "I'll try." The climb was long and tedious but was accomplished nevertheless and now! There was my reward, two eggs!

The nest was a huge structure and very old without a doubt. Outside measurements were 14 inches deep and two feet four inches in diameter. In-

side three and one-half inches deep by nine inches in diameter. Composed of very coarse sticks, weeds, etc. On top of which was a quantity of inner bark of trees and a corn husk.

The eggs were warm as incubation was commenced, although the old birds were not around at the time, but were seen at the nest later on. After lowering the line I made my descent as quick as possible and measured the same which proved to be forty-five feet, and the place where it came down eighteen feet from the base or trunk of the tree. So you will understand that the tree was much inclined, having few limbs the climb was very dangerous. The eggs were ordinarily marked and incubation commenced but the cause of the birds' absence was not determined.

On April 29th as I was prospecting for Owls and Hawks nests in the same piece of timber as the above I discovered another nest of this species which happened as follows. I had climbed a giant oak to the height of about fifty feet to where there was an old cavity, when I saw towering up in the distance a huge nest which was in the highest tree around and easily seen above all the others. After walking in that direction I finally saw the female rise off the nest and fly away soon to be seen circling around with her mate overhead.

This nest was placed in the very top-most limbs of a "black-oak" or "pin-oak" and elevated to the height of some fifty odd feet. Slow, but sure I made my way up, now and then a dry and decayed limb would snap off under my feet and send a thrill through my body. Although it was a still day every little breeze would make the tree sway terribly I thought. At length I came up to the nest, or rather up under the nest, for I could get no further. I now had a fine view of the surrounding forest tree tops.

Holding on with one hand under the

nest and with the other I reached out over and onto the nest and found it contained three eggs. Putting one egg in each of my vest pockets and surveying the nest carefully, noticing the materials, etc. I started downward. When my feet once more struck the solid earth beneath I rejoiced. Then carefully taking the three eggs from as many pockets I laid them on the ground all safe, a beautifully marked set. In color they are a greyish-white minutely speckled all over with light brown and lilac, while over the whole are again large blotches of rich brown and lilac. The marking of the two are confined to the smaller end, while the third is uniformly marked. Incubation in this set was quite far advanced.

This being without a doubt the same pair as the first set of eggs was taken from for it was in the immediate vicinity of the first nest, and their second attempt at nidification.

This nest, however, was newly built and constructed almost entirely of poplar sticks, on top of which was spread a quantity of bark strips, moss, leaves, etc. Having only one hand to work with I could not measure the nest.

I am satisfied with the statement made above, that the nest was newly built, for the ground at the base of the tree was thickly covered with sticks, which dropped from the lofty site at the commencement of the nest.

343 BROAD-WINGED HAWK.—From the above described Red-tails nest, I now struck out toward the setting sun, finally I came to a ravine in the woods, crossing this stretch of land covered with brush and second growths, all the large trees having been cut into cord wood a few years previous. I still keep my course westerly. Now and again I would stop and watch the squirrels and emigrating birds. Suddenly I thought of the distance I was from home and that I was getting further away every

minute, the sun having already set. So I turned about and started homeward in a northeastern direction. I now recrossed the ravine, but at its northern end where it was narrow and sparingly covered with brush and second growths.

Directly opposite the ravine from where I started to cross it, was a large oak, about a rod back from where the big trees were again growing. As the tree was in my direct course I passed within a few feet from it. When I stopped to look up and admire its beauty. I indistinctly saw in the main fork a nest of sticks. Immediately I made preparations for ascending, and as I did so a Hawk flew therefrom and into the fast approaching dusk. The nest was not very high so it did not take me long to come up to a level with it. It contained two eggs which were new to me, these were a light blue and covered on the larger end with blotches of rich brown. In size somewhat larger than the eggs of either the Marsh or Cooper's Hawks while decidedly smaller than those of the Red-tailed or Swainson's Hawks. As it was an incomplete set I decided to leave them for several days for completion.

Making my way downward and gathering my effects I groped my way through the woods in a homeward direction. The sky was clouded over and a storm threatening. After clearing the woods my progress was both rapid and easier and I was soon at home, just in time for supper. After heartily partaking of the same I consulted the authorities, such as were at my command, and placed it as probably the Broad-winged Hawk.

Several days later, on May 4th, to be correct, I slipped away from my work for a brief visit to the Hawk's nest. As I found nothing on my way in the Rap-torial line I will not stop to describe the tramping to the "New Nest." Suffice to say the day was exceedingly warm for that early date and that I was

quite exhausted at my arrival at "Hawksville" as I often of late called this particular grove, which seemed quite well supplied with various species of Hawks.

After coming within sight of the nest I saw it was occupied by Madam Hawk. Accordingly I rapped on the tree with a stick, but she refused to leave and only did so after repeated loud rappings, when she slid from the nest and flew across the ravine and with a graceful upward curve alighted among the branches on the opposite side. I was now satisfied that the species was as I had before placed it, Broad-winged Hawk.

The nest now held four eggs, a beautiful set, in fact the prettiest Hawk's eggs I have ever seen. They are white with a bluish tinge, with small brown spots all over them. Three are beautifully splashed at the large end, while the fourth is sparingly marked at the smaller end with delicate brown or light chocolate. The egg with the markings on the smaller end was the last laid, as the bluish color is perfect while the others are bleached out in various stages, which is often the case with incubation from fresh to advanced.

The nest was constructed of coarse sticks, bark, etc., on top of which was spread a quantity of fine ones and stripes of bark. Diameter on top 20 inches which tapered down to a few inches at the bottom according to the crotch in all 15 inches deep with a depression of two inches. Situated in the main fork of an oak tree right next to the trunk and 31 feet from the ground.

After making a small tour about the grove I returned to this nest to find the Hawks there, where with the best opportunity I fully identified the species to my entire satisfaction.

EDW. W. SPRINGER,
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ALBION, N. Y., SEPT.-OCT., 1900.

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A Day on De Cicheo Island.

BY E. S. BOWDISH.

What collector, whose observation has been more less confined to birds

rather solitary in their nidification, has not felt his nerves tingle with responsive sympathy, as he read the account of the visit of some fellow-collector to the island home of the gregarious sea birds, and has not longed for the time to come when he too might realize this novel experience.

This then was my experience when with my Company I came to Aguadilla to relieve H Co. Standing on the west shore of Porto Rico, in front of this little town one allows his gaze to wander across the expanse of rippling waves where twenty miles away in the usually lazy atmosphere indistinctly rise the rugged outlines of a rocky islet. This is DeCicheo.

Enquiries regarding this island revealed that it was uninhabited by man, save by transient fishing parties, and that it was the home of myriad water fowl. Eagerly peering through a rather unreliable telescope, the property of one of the Co. members, went far to confirm the latter part of this information, revealing a maze of birds winding and circling in the haze with which the island was enveloped. Thus it may be easily imagined that from an indefinite wish there came to be gradually maturing plans in my mind for an invasion of this ornithological paradise. From the beginning it seemed that in developing these plans I constantly encountered obstacles, but passing over these after much persistent effort, on the evening of June 23d, at 10:30 I found myself seated in the stern of a staunch little twenty-foot one-master, and tiller in hand I guided the small craft away into the uncertain gloom that the twinkling stars did little to relieve, the two

boatmen bending to their oars for the breeze did not even stir the idly flapping sail. It was probably some hours later when a faint breeze stiffening the sail, one of the natives relieving me at the tiller, I stretched myself in the baggage in the boat's bottom and from thoughts of the morrow's prospects, my mind glided away into that shadow land where it is no surprise to take eggs of the Great Auk from Robins' nest's

Once during the night I heard the cry of the islands first herald, presumably a Laughing Gull, but little roused from slumbers was I until the grey of night's last hours was resolving itself into the light of dawn. Clear cut and rugged, the object of the trip met my gaze, but still some distance away, and now indeed its inhabitants were sending out messages in plenty. Occasionally, on easy, graceful wing the Frigate Bird, (*Fregatta aquilla*) soared aloft while, silver white, a Gull or Tern dashed lightly above the waves, too far away to be recognized, but the most frequent form, and one which at a distance suggested a rather heavy, clumsy duck, was the Common Booby (*Sula sula*). These birds often flew low over the boat, craning their necks and staring down at us as though questioning the cause of our invasion. Passing to the north of the island we continued to the west coast where, in a little cove we dropped anchor. At the back of this cove a slight hollow under the rocks formed the camping place of a party of three native fishermen from Mayaguey, and here too we established our base of operations. On ledges of rock directly above this camp site, and all along the coast the Noddy Terns, (*anous stolidons*) were breeding in numbers.

The island may possibly be two miles across in its widest place. In places the rocky walls rise direct from the water, in others fringed by a narrow

beach, and they rise to a height of ten to fifty or sixty feet, from their summits the slopes stretching up to fairly lofty pinnacles and densely grown with an impenetrable jungle of bush and vine, while fringing this and liberally sprinkling the rocks are many cactus, of whose presence the over-eager collector becomes painfully aware.

I regretted greatly not having a camera that I might have depicted some of the scenes of bird-life. Nearly all of the birds are remarkably fearless, as the denizens of these islands are usually described, it would be hard to find more willing sitters than many of these birds would have proved.

Unquestionably the most abundant bird of the island was the Common Booby. Unfortunately I was late (or in the wrong time) for eggs of this species. In one case I saw a young not over half grown Booby, and from this there was every stage of size and plumage up to young strong on the wing.

One of my natives volunteered the information that these birds breed on the beach, laying on the open sand, and that the eggs are bluish in color. Of the birds of this part of the world it is hard to say what is a late date for nesting since there seems more or less continuity and irregularity. For instance I have found eggs of *Outhia bicolor* almost every month in the year.

I found, too, that I was late or out of season for the Frigate birds, one of the specimens I brought back being an apparently full-grown young male, but whose plumage was very undeveloped, head and much of plumage white, bill and feet blue, and tail square, having as yet not developed the fork. These birds were fairly plentiful and one or more could be seen at any time sailing within easy gun-shot often nervously closing and opening the forks of the tail.

Another bird, six or seven specimens of which, I had a glimpse of, I shall

not speak of now. The identification is hazy as yet. Later I may be able to add a note relative to it.

The Laughing Gull I noted singly and in twos and threes but no evidence of their breeding here. What I regarded as strange was that I did not see a single Pelican.

The Sooty Tern did the best for me in the way of eggs and the majority of these were badly incubated. I collected thirty-four sets of one each and could have taken many more.

I also collected one recently hatched young, and at least one pair of birds in the ledges over our camp were feeding young apparently full grown. The nesting sites were ledges or shelves in the face of the rocky walls, ranging between ten and forty feet above the beach. Some were narrow and others wide. In one case the egg was laid underneath a cactus plant on top of the rocks. In some instances there seemed to be a slight gathering of rock chips and small pebbles about the eggs in the form of a ring, and in a very few one or two bits of twigs were added, but otherwise there was no nesting material and often the egg laid on the bare rock. In coloration the series that I took show considerable variation, the ground tint ranging from whitish through pinkish, to decided buffy tint, and the markings, chestnut and lavender shell marks, ranging from few scattered dots to quite thickly marked, some specimens having well defined wreaths of small dots about the large end and one a single blotch, besides a few other marks, which measures 0.95 in diameter. I give below measurements of extremes and of eggs selected at random: 2.16x1.37, 2.11x1.35, 2.02x1.41, 2.07x1.42, 2.06x1.38, 1.99x1.46, 2.06x1.49.

The Noddy Tern sits closely (as may be instanced by my native reaching over the edge of a ledge and catching my first one in his hand), and when driven

from their egg quickly return, if permitted. Occasionally one bird is found nesting on some isolated ledge but usually at least three or four in close proximity and sometimes seven or eight, according to the facilities of the site. When disturbed they dart from the ledge and close together they dart swallow-like about the intruder's head uttering angry cries. Their notes at this time and while feeding young are scarcely distinguishable from the hungry mutterings of young crows.

The only other bird of which I secured eggs was the Bridled Tern (*Sterna anethetus*). These birds are nothing like as common as the Noddy.

I think it doubtful if fifty pairs of birds were breeding on the entire island. They are also, I should judge, later in their breeding, the only three nesting sites which I found occupied containing a single egg in which incubation was only just commenced. Also I noted birds showing strong anxiety regarding certain nooks under the rocks, quite similar to those where eggs were found, and I have no doubt that these were nesting sites selected but not yet laid in. In one such case the native caught the male bird on the nest, or at least in the nook.

The first egg was found in a slightly hollowed spot on a flat rock and arched over by a small rock. No pretense at nesting material whatever. The second was in a sort of pocket in the face of the cliff at about 40 feet above beach. The third was under an overhanging rock about ten feet above beach. From the small amount of data I should judge that the birds almost always select rather hidden and covered sites and from this fact and the further one that they do not sit nearly so close as the Noddy, their nests are not so easily found, the Noddy Tern being usually easily seen in its nesting ledge, whereas the Bridled leaves its nesting site with a dash often before you see it.

The three eggs show quite a little variation and are markedly different from those of the Noddy. They are quite bluish in ground tint, the first one thickly sprinkled with cinnamon specks, the second much less liberally marked with large dots and the third with less and still larger markings. They measure as follows: 1.74x1.27, 1.80x1.23, 1.80x1.36. The birds like the Sooty dart about one's head with angry cries, the latter distinct from those of their relatives being quite like the high pitched enquiring note the crow sometimes utters in fall and early winter.

I lacked time to investigate as to land birds but noted one Mourning Dove and was quite sure I heard the notes of *Vireo calidris* and also of *Margarops fuscatus*. That evening as we sat about the little camp fire sipping the coffee, which only the Porto Ricans know how to make, I felt as though I would gladly have put in a month in this favored spot. At about 8 p. m. we went aboard but the wind was so strong that the natives were unwilling to hoist sail. Finally, after vain waiting until midnight, during which time I slept, they pulled up the anchor and leaped to the oars, and it took a half hour's hard pulling to take us off the rocks sufficiently to set sail. In a few minutes I was again slumbering, and during the larger part of the trip I continued to doze unmindful of the boat tossing like a cork on the waves, or the sheets of spray which were drenching me. It was 1:30 p. m. the next day when we again reached Aguadilla, and notwithstanding the fact that I was not overladen with specimens, still I felt well repaid for my trip and a bright spot in my memory will long be occupied by the wild little island of DeCicheo and its feathered denizens.

NOTE.—Since writing the above it appears highly probable that had there been opportunity for thorough work at least two and perhaps more species of

Booby would have been developed, also that the Dove may have been the Zenaida.

Nests and Eggs.

Perhaps no bird in America, certainly no bird in the Great Lake Region, equals the common Bob-white or quail in the number of eggs it sets upon. This bird not infrequently lays eighteen eggs, and even more are found in one nest, but I can assure the readers that with any other shaped eggs the Bob-white could never succeed as a successful setter. I will suggest that my friends with the specimens at hand, compare a set of twenty eggs of this species with an equal number of the same size in longer and shorter diameter in any other bird, and note which lot occupies the smaller space. We may say for illustration, that the egg of the quail is triangular shaped, and fits in as no other egg can.

With all birds that lay a good sized set, so far as my observations go, the eggs are deposited in an exact circular shaped group. The bird must use reason in thus arranging them, for it is only by this order that they can all be properly covered. Not infrequently when a grouse is startled from her nest she tumbles one of her treasures from the hollow. If the egg is not too far removed from the nest it will be found returned to the nest within a day.

I have been informed that the Brown Pelicans, which nest in vast colonies, steal eggs from one another's nests in order to fill their complements, or at least take possession of these they find on the ground and roll them into their nests. Although this does not seem likely, I cannot dispute it, and moreover there were strong proofs that such was the case in many of the nests that I examined in Florida. These nests which were always near together, contained four eggs, never more; one to three of

which were ready to hatch, while the remainder were fresh or nearly so. And again there would be eggs in the same nest with young over a week old, or young ones varying a week or ten days in age. This pelican has not the conterminous habit, at least as a rule, for we found many nests with three and four perfectly fresh eggs in them. One point is evident, if the charge of thievery is proven, and it is that the old birds know their limit as to number of eggs, for not in a single instance were more than four eggs or young, or both, found in one nest.

When the young birds emerge from the eggs, the old birds carry the useless shells away, and it is rare to find any portions nearer than ten feet from the nest. The Robin and most of the other small birds simply fly with the shell and let it fall, but some species, as the shore birds will carry the bits of shell about for some time, and the Spotted Sandpiper has been seen to carry the shells to the water and immerse the pieces.

Some species of our feathered friends conceal their nests most effectually in holes and out-of-the-way places; others build their nests in plain sight but rely on deception of appearance, as the Hummer and Gnatcatcher; and still others rely solely on the protection afforded by the markings and color of the eggs. The shore birds and terns and gulls rely entirely upon the protective coloration of their spotted eggs. I have often hunted in vain for the nest of the Spotted Sandpiper, Killdeer and Field Plover, when I knew that their eggs were lying in plain sight and probably quite near to me. The Killdeer never builds a nest to my knowledge, but deposits its eggs on the ground, generally selecting a spot in the field or lake front where there is a plentiful supply of gravel, which makes it very difficult to discover the speckled eggs. At times the old birds arrange the small pebbles

about the four eggs, and if this gravel is disarranged it will be found to be placed in position again by the following day.

In the deposition of their eggs the birds differ vastly as to time required. The Great Northern Diver lays its two eggs two or three days apart, and many of the larger birds skip a day. This may be considered as a rule; that those birds which lay a good many eggs at a clutch are in the habit of depositing an egg a day during the period of deposition, while the birds which lay but a few eggs are more apt to have longer periods between the additions. The two cuckoos, Black-billed and Yellow-billed, which usually deposits two or three, sometimes four eggs, often have periods of three days between the eggs, and always as much as two full days. The small birds are all credited with laying the eggs in the order of one a day, and some have beaten this record to a marked degree in the depositing of a set of four or five. Once in the case of a Phoebe, the five eggs were laid in four days, and a Chipping Sparrow laid its four eggs in much under four days. The buzzard hawks deposit an egg every two days, while the Sparrow and Cooper's hawks lay oftener. Great-horned owls have a period of two days between the depositing of the first and second eggs, and as the eggs are generally laid in cold weather, the old bird begins setting as soon as the first egg is laid. From this it results that the young are hatched at two days apart and this difference in size is noticable until the birds leave the nest. The Rails lay an egg every day, as do also the Woodpeckers.

Do birds carry their eggs and young? Some species certainly do, and have been recorded in the act. I have never seen this method of removal, but fully trust in the observations of my friends. An observer in whom I have confidence tells me that he has seen the old Wood-

cock fly with one of her young firmly grasped between her legs. It is a common thing to find that a brood of young Woodcock has been removed from a locality over night. Other birds also carry their young, and in various ways. The Wood Duck must transport her downy nestlings to the water from the hollow in the tree where they are hatched, for the delicate creatures could not drop from the height. Some maintain that the young are carried on the back, and others say that the old birds grasps the nestling in her beak. The only case of a birds' carrying its young that I have met with, was in the Great northern diver, which I watched as she swam away with her two young on her broad back. A friend of mine whom I consider truthful, claims that he has seen the old Loon flying from one lake to another with her young on her back; and this does not seem unreasonable after I have seen the bird transporting her brood in the water. Capable writers who have witnessed the act say that it is a common thing for Auks to hold on to their single egg when frightened from the cliff where setting, and to let the eggs fall in the sea as they fly. The bird evidently holds the egg between its legs as it rests on the rocky perch, and in being suddenly startled from its position holds to the egg, forgetting to release it, or perhaps attempts to carry the egg as a matter of fancied security. Observers have recorded the act of the Oyster-catcher in carrying its eggs, and in successively removing them to a place of safety.

But it remains for the wide mouthed Goatsuckers to receive full credit for the remarkable habit of carrying their eggs in the mouth. No less an authority than Audubon claims that the Whip-poor-will at times carries its eggs in its mouth. I have never witnessed the act, nor have I met with anyone who has seen the bird carry an egg in its

cavernous mouth. Still I believe that it is done, and I feel confident that the Nighthawk and Whip-poor-will are both given to transporting their eggs from one place to another. The Goat-suckers lay their eggs on the ground or leaves, and the eggs may be suitably incubated in most any level field or wood. If then, the bird wishes to remove its eggs to a place of safety, it is reasonable to think that it will do so if it has the ability. That it has the capacity there is no doubt, as anyone will agree with me who will fit an egg of the two species of birds into their owner's mouths.

Although the eggs of a species follow a type, and eggs of a kind are generally so nearly alike that an expert can identify them as rule, there are frequently cases of marked difference, and stranger still, there are not rarely instances where one or two eggs in an otherwise normal set are so peculiarly shaped, so large or under sized, or strangely marked, or not marked at all, that the oddities in no way resemble the others of the set. To simply enumerate a list of oddities would take too much of our space, for much investigation has been devoted to this subject. Certain it is that much that is credited to an abnormal condition, especially as regards peculiarities in coloration, is nothing more than an idiosyncrasy of the bird. This is markedly noticable in certain cases, where certain pairs of birds have laid characteristic sets of peculiarly colored eggs, and which have been noted season after season. So marked is the set of eggs laid by a particular bird that collectors have recorded the peculiarity for years. For instance, many collectors make a speciality of collecting and recording the sets of hawk's eggs, and I have known of a collector telling just the route that was traversed by another "egg crank" by looking at the sets of eggs taken on a day's trip. This knowl-

edge was gained by previous year's experience with the same pairs of birds, for birds of prey, especially hawks, nearly always return to the same neighborhood, and generally to the same tree, and in my experience I do not know where a pair of hawks has been driven from a piece of woods by persecution from egg collectors, and the only way to get rid of a pair of located hawks is to kill them or chop down the forest.

It is difficult to satisfactorily account for the variations in the eggs of a set, both as to markings and size and shape. Some hawks of my acquaintance lay very handsomely marked eggs, while others of the same species habitually deposit indifferently marked shells; and still others lay very plainly marked examples in sets of otherwise well marked eggs. In the nests of certain pairs of Red-tailed and Red-shouldered hawks we are sure to find sets of eggs marked almost identically season after season. It is not unusual to find in the nest of the Red-tailed hawk, one well marked egg and the other almost, or wholly without spots. The same peculiarities may be noted in the eggs of the smaller birds. For instance, some Phœbes habitually lay spotted eggs, and this variation from a standard will be found to obtain in all sets of eggs laid by this particular bird, as I have noted season after season.

The Humming-bird in Illinois.

It was so destined that many years should elapse from the time I began looking for the diminutive home of little "*Trochilus colubris*," until the day I should be rewarded for my untiring efforts, by finding one of these interesting little gems of bird architecture.

This little winged fairy of dazzling brilliance, is well known as the smallest of all our eastern birds, yet a better idea of its tiny form may perhaps be

realized, when we speak of its weight—a slight 20 grains—body, feathers and all.

If I were asked what bird has proved the most interesting study for me, I should answer without hesitancy—the Ruby-throated Hummingbird.

If Nature in some lenient mood should grant to me the *creation* of a bird-form in accordance with my idea of perfectness, I would stop at sight of the male "*colubris*." I would not change a single feather of this little creature, so perfect in form, so lithe in action, so resplendent in plumage, but if I might add to his many charms, a sweet bird song, would he not indeed be perfect?

The male Hummer is the more beautiful of the two, because of the rich, ruby throat, which is lacking in the female.

This beauty spot must be seen in strong sunlight, to fully appreciate its brilliant lustre, for few bird colors (in our northern zone at least) will equal or even approach the deep rich shades of ruby and green and the delicate sheen, of the live Ruby-throat. A dead bird in the hand, loses much of that freshness and sparkling reflection, so noticeable in its active movements.

An early Sabbath morning of the present season found me rambling in the woods south of the village. Stopping for a moment's rest under a small, bushy tree at the edge of the timber, I was soon unconsciously surrendering to a feeling of lethargy, when I was aroused.

Three Ruby throats (two males and a female) with a buzzing introduction, presented themselves and alighted on a dead twig, within four feet of my face. The rising sun shone on them as they preened and smoothed their feathers, in the making of their morning toilet. A more beautiful sight I have never witnessed. I feasted my eyes on them, scarcely daring to breathe, until an aggravating mosquito caused me to make an untimely movement. In a flash the

scene was changed—the living jewels were gone.

The rapidity of the Hummer's flight is one of its most wonderful achievements. It possesses a miraculous force of energy in its tiny wings, so great a velocity that the eye finds extreme difficulty in following its flight. Only a slight buzz with no perceptible change or exertion in its motion, is sufficient to carry it instantly from one flower to another. Indeed it is the only bird of my observation, that has seemed to have mastered the art of flying equally well, either forward, sidewise or backward.

Not the least of its accomplishments, is the art of nest-building. Who has looked upon a nest of the Hummingbird and not marveled at the skill shown in fashioning so dainty, yet so substantial a structure—a structure not within the possibilities of human hands.

The Ruby-throated Hummingbird while not abundant, may be called a fairly common summer resident of this part of Illinois. It does not often arrive before May, but its departure in the fall is delayed until the frosts have claimed many victims. It is not of unusual occurrence to find a Hummer hanging quite dead, to the vines about the residences, after a sharp October night's frost.

While it is from the flower-beds of the village yards that we form our acquaintance with little "*colubris*," we must hie to the woods, if we would wish to pry into his family secrets.

A limited number build their little homes in the vines and shrubs of the towns and in the orchards of the farm yards, but the great majority prefer the deep, dark, silent woods, where they are practically undisturbed.

The rising sun of June 6, 1900, saw me "to the woods away" and an hour later I was counting warblers in a fine, old bit of timber in the Salt Fork bottoms. I noticed a Redstart dart out into the open with a Hummingbird in hot

pursuit "charging bayonets." I thought this action rather suspicious on the whole and particularly so when I saw the little charger return to the same vicinity. It was my intention to keep an eye on her, but "there's many a slip" and I lost sight of her suddenly and completely.

With the hopeless air of one "looking in a strawstack for a needle," I remained quite still. Scanning the tree tops for that one wee spot where the nest was probably resting and particularly observing the innumerable, good locations where the nest was't, I recalled the philosophy of a ten year old German boy who was wading a swamp with me earlier in the season. I had just examined a likely-looking clump of weeds and remarked that it was a fine place for a yellow-throat's nest. 'Oh! lots of good places they is, Mr. Hess,' the youngster added, 'but its not places we're after—its nests.'

Another commotion in the tree-tops gained my attention. This time, a Wood Pewee had ventured too near the Hummer's residence, and he too with surprised and painful cries, beat an ignominious retreat.

For once, I was more fortunate and succeeded in locating the tree when little "*colubris*" returned and disappeared.

Advancing to the tall slender sapling, I struck it lightly with my hatchet and immediately she was in the air, buzzing excitedly. I was now certain I had found the right tree, but was still unable to locate the nest, until the Hummer settled upon it.

The nest was saddled to a horizontal limb fully twenty-five feet from the ground but while almost invisible from below, the bill and tail of the setting bird could be plainly seen.

To climb so slender a tree was out of the question, but from a near-standing hickory, I gently bent the sapling by means of a forked pole and safely secur-

ed my first set of the Ruby-throated Hummer.

The little female repeatedly left and returned to the nest as I drew nearer and at one time was within three feet of my hand. The nest was beautifully constructed of pure white wool and artistically covered with small lichens—so perfect an imitation of a small green knot that ordinarily the eye would pass over it unobserved.

Complete, the nest measures but one and one-half inches in diameter, with three-fourths of an inch diameter and one-half inch deep as inside dimensions. The two fresh eggs were typical specimens.

Near by I found another nest almost completed. My examination must have been resented by the owners, for it was promptly deserted and I collected the empty nest a month later. It was also saddled to a branch of a sapling but much nearer the ground—only 9 feet.

An hour later, while passing through a very dark part of the timber, I startled another Hummer. Ordinarily, I would not have noticed the slight humming sound, but I was gradually becoming accustomed to the buzzing that so clearly determines the presence of one of these little birds.

Cautiously advancing and intently listening, I succeeded getting in close proximity, the actions of the Hummer proving that I was in "warm" territory.

By following the same program as previously, I soon located the nest snugly fastened to a branch of a small sapling, just out of reach from the ground. This was a larger nest than my former finds, being two inches in diameter. It was also constructed of pure white wool and green lichens and contained two fresh eggs.

Next season I expect to pass many pleasant hours with the Ruby-throats and while I hope to find many more nests, I feel that in justice to these interesting little neighbors, my cabinet

must not contain more than the two sets I now possess.

ISAAC E. HESS,
Philo, Ill.

Association for the Protection of Wild Birds in Scotland.

To the Editor of The Oologist :

We beg to call the attention of your numerous readers to this association which is now forming in Edinburgh, Scotland.

The scheme is brought into existence by the pitiless destruction of hundreds of thousands of birds annually massacred, generally in the breeding season, to supply the demands of a barbarous fashion in dress and decoration.

The world at large can ill spare the brightness of the rarer species, while agricultural districts suffer owing to the alarming decrease of the common kinds provided by nature as the great grub destroying agency; an agency for which science can find no sufficient substitute.

We ask the co-operation of your readers and as distance is no object in joining such a scheme, we hope to get a generous response.

With the kind permission of you, Mr. Editor, we shall publish a list of all members when a sufficient number of names have been received. We shall also be glad to acknowledge any donations which may be received to carry on such an Association. The public mind at this time is taken up with the war now raging in South Africa and rightly too, but the humane ought to give a little thought to the war which is being constantly waged against the birds in all countries. Trusting you will find space for this letter,

Yours faithfully,

W. A. NICKOLSON (Goldfinch),

JOSEPH ALLAY.

39 Tower St., Portobello, W. B. Scotland.

The Giant Cactus as a Nesting Place for the Western Red-tailed Hawk.

—

The Giant Cactus (*Cereus giganteus*) is the favorite nesting place of the Western Red-tailed Hawk in the desert region south of Tucson, Arizona.

Sahuara is the Indian name for this cactus and is the most used name by the inhabitants of this region. It often reaches a height of forty feet, and on the branches the nests are built.

The nest is generally built high enough to command a view of the surrounding country, and may be seen for a distance of two miles, or with field-glasses as far as you can see; for this reason it is an easy matter to find their nests, but not so easy to obtain their eggs.

The position of the nests and the variation in the size and markings of six different pairs of hawks may be of interest.

March 16, 1898. Nest in Sahuara, 16 feet from ground, made of sticks, lined with small sticks, grass and a few feathers, eggs, 2.32x1.87, 2.28x1.83. Incubation six days, marked with blotches of very light brown.

March 21, 1898. Nest in Palo Verde 12 feet from ground, made of sticks, lined with small sticks and bark, eggs, 2.22x1.80; 2.16x1.78; 2.15x1.79. Every egg is marked entirely different in this set, first spotted evenly with brown and lavender, having more lavender than brown; second, blotches and scratches of yellowish brown at great end; third, has three large and several small spots of dark brown.

March 29, 1898. Nest in Sahuara 18 ft. from ground, made of sticks lined with bark and grass; the bird before leaving nest covered up one of the eggs. Eggs, 2.25x1.85; 2.23x1.83. Incubation two-thirds, marked with irregular spots and blotches of light and dark brown.

April 1, 1898. Nest in Sahuara 6 feet

from ground, made of sticks lined with bark. Eggs, 2.23x1.77; 2.13x1.74. Incubation begun. First egg marked with spots and blotches of brown, second with spots and blotches of lavender evenly over whole egg and at small end marked with blotches and scratches of brown.

April 2, 1898. Nest in Sahuara 12 feet from ground, made of sticks lined with bark, grass and a few feathers. Eggs, 2.40x1.81; 2.32x1.90; 2.25x1.79. Incubation six days; marked with blotches, spots and scratches of reddish brown, one egg has all the markings at small end.

April 10, 1898. Nest in Palo Verde 10 feet from ground, made of sticks, lined with bark, leaves and feathers. Eggs, 2.28x1.85; 2.25x1.80. Incubation one-third, first, marked with light and dark brown and lavender, second, with light brown at small end.

Some nests were over thirty feet from the ground.

J. H. CLARK.

A False Alarm.

While out on a ramble recently I was passing near a thicket, when just in front of me in the brush came very distinctly the distress cry of a Robin repeated several times. A number of robins from the neighborhood came to the rescue, and I, being curious to know the cause of the disaster, walked up close to the brush and looked in. What should I see but a lone catbird sitting on a branch a half a dozen robins hovering around her. They, however, soon left and the Catbird hopped about acting as if she was really proud of the disturbance she had caused. What could have been the object of the Catbird?

D. S. BULLOCK,
Agr'l College, Mich.

If You Want to Know

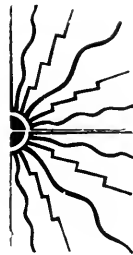
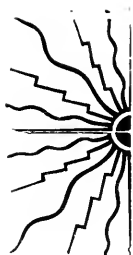
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ALBION, N. Y., NOV., 1900.

WHOLE No. 170

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The Belted Kingfisher.

Over nearly the whole of the United States members of the angling craft are familiar with our common representative of the family, the Belted Kingfish-

er, *Ceryle alcyon*. In some quarters, I understand, this bird is not to be found, and again it is shown to share territory with a species only found west of the Mississippi. We will only speak here of our familiar bird of the East, known to almost everyone, and so common along our small streams, as well as upon our largest rivers, ponds, and lakes, quite eight months of the year. This bird, so abundant in the Mississippi Valley, as also to the East and way north into the British possessions, has association with the fishermen who make it at once a bird of augury with many, as well as a pleasing companion to anglers. I leave it to others to judge the truth of the many fabulous stories of this innocent bird, mysterious stories which we hear so often. That the earliest of the ancients took much interest in the Kingfisher, from an esoteric point of view, is fully proven by writers as we have references to it before the foundation of Rome was laid, and some of the hieroglyphics of Egyptian historians attach an interest to it as of marvelous powers.

In an inspection of its name we learn much, both as to acknowledgement of the bird's worth by ancients and moderns, as well as the happy connection between the Kingfisher and the ancients. Kingfisher is a very ancient English name, and may be found in many books centuries old. The word "belted" of course, is merely of specific distinction describing our bird, which has the distinguishing feature of a broad belt of color on its otherwise white breast. It surely is an honor to a bird to be named kingfisher, and we all, when viewing our friend's performances on the lake or stream, acknowledge that

he deserves the title. If we now examine the scientific name, *Ceryle alcyon*, we find that the generic name *Ceryle*, or *Alcedo*, as the type of the family *Alcedinidae* is called, means, I am informed, Kingfisher. The name *alcyon*, it is claimed by some, is given in allusion to its sword-like bill, the sense of which may readily be called to mind by those familiar with the dagger-shaped mandibles. Falchion, too, is possibly derived from this source. But if we go back to ancient Greece we will find that three thousand years ago this bird had a connection with the weal and the woe of the inhabitants. *Hals* is the Greek for sea, and *kunani* for search. We may also learn that *halyon* is a term applied by the ancients to the seven days which immediately precede and follow a particular date, from the circumstance that the *halcyon* or Kingfisher selected that period for incubation, and they believed on that account the weather was always remarkably quiet about that time, hence the words 'halcyon days' have passed into a proverb, as denoting times of peace and tranquility."

In tracing out this name Kingfisher, we are pleasantly surprised to find the connection between it and the "halcyon days" of our agreeable trips on lake and river, when the blue-coated, wary, yet curious inclined birds, flitted about our seat, loudly proclaiming with strident notes against our invasion. Ah! those were happy days with the bass on the lake or river, or along the edge of the cherished, well known and remembered trout stream, and whether the expedition was for trout or bass a Kingfisher was always on hand. Birds always look so much alike as to leave an impression that the same one always accompanies us. If we are floating down the stream, the mocking fellow is always ahead, and at the next bend and he drops from his perch and goes sweeping away ere we are within gun-

shot of him, appearing again at the next turn, where with his blue coat, white vest and blue or bronze tie, dressed low, he is seen perched demurely on a branch or dead stump at the side of the water. Sometimes one flies past us up the stream, describing a safe radius, but soon his rattling notes can be heard as he cuts across a narrow neck of land below us, and again we continue to chase him.

I have met the Kingfisher everywhere I have traveled east of the great river, and have always found him the same successful fisher and discreet, strong flier, and with that exasperating, mocking clatter of a laugh. In the Lake Superior region to the lower part of Florida he fishes successfully, either in fresh or salt water, and dives with apparently the same precision in the coffee colored flood of the Ohio as in the crystal waters of the St. Lawrence.

There are many interesting points to study about our birds, but there are very few which will prove more interesting than the Kingfisher, or repay us better for our pains. Upon an intimate acquaintance we will find him a digger of wonderful ability, a fisher of surprising merit, as well as a remarkable provider for his family and careful instructor of progeny. Add to these attributes that he is wonderfully careful with his dress, often presenting the plumage of his coat and vest, in which he takes the pride of a swell, and that he is exceeding wasteful at seasons, we have our halcyon fairly summed up.

In this section, Lower Michigan, the Kingfisher usually begins nesting in early May, and generally about six or seven weeks after his first spring appearance. Some seasons the birds arrive in early March from their southern haunts, and when the ice is still covering the lakes and ponds. Several nests have been found with eggs by our local collectors in April, but usually it is useless to spend the time in digging

out the burrows before the middle of May. This singular bird has the remarkable habit, shared in by only two other species of birds, to my knowledge in this section, of laying its eggs in a burrow in a bank or side hill, usually of sand. The tunnel is of a size to easily admit a bird, and is from three and a half to six feet long, but generally about four to four and a half feet in length. The tunnel is usually straight, but is sometimes found to wind slightly. At the end an enlargement is hollowed for the accomodation of the eggs and setting bird, and herein the duties of incubation are performed.

The eggs from five to six in number are smooth, white and shining, as with nearly all birds who nest in excavations. They much resemble the eggs of the Burrowing Owl. When the young are fed at first the old ones partially digest the fish and then regurgitate, but long ere the young anglers have left their home in the sand bank for a life on lake or river, they are able to engulf as large a minnow as the older ones.

As a fish destroyer the Kingfisher is undoubtedly at the head as to numbers in the northern United States, although the loons, herons, and many other species are far more destructive as weight goes. I have repeatedly seen this blue-coated epicure trying his skill along trout streams, and at these times wished that the whole race was obliterated, particularly when I had good reasons to begrudge him his never varying luck, and mine was poor.

The Belted Kingfisher is the only species in my neighborhood which dives clear under water for its prey after hovering over the water. Other birds as the ducks and loons dive when swimming, while the Osprey drops upon its prey with its feet first, but the Kingfisher is the only bird which makes a regulation dive from the air. It secures its minnow about once in three

attempts, and I have seen a bird dive in the same spot seven times before success crowned its efforts.

MORRIS GIBBS, M. D.,
Kalamazoo, Mich.

Prairie Hen in Illinois.

It is with great interest that I note the gradual increase of the Prairie Hen (*Tympanuchus americanus*) in this part of Illinois.

This increase while very slow for several years, has now become so noticeable as to excite comment among even the casual observers of bird-life. However it has long been a well known fact among the hunters, who have been handicapped by an excellent game law and who are in consequence clamoring for an extension of time for shooting this noble bird.

It is owing to the framer of the "three year law" in which no Prairie Chickens were lawfully killed, that "*Tympanuchus*" has gained a new lease of life. The result is, that a bird rapidly becoming extinct, is now so well rooted and established that its future is almost assured.

Our present game law allows its shooting only during the space of thirty days or from Sept. 1st to Oct. 1st and is a grand aid in the preservation of the species.

As with all our game birds, the Prairie Hen raises a large family. The complete set numbers from 12 to 17 eggs and when a lesser number is found I believe it to be due to some foreign agent.

The Prairie Hen usually begins nesting about the middle of April and the full complement is ready for incubation about May 10th. A typical set of thirteen eggs in my collection were found April 27, 1898. I regard this as one of the earliest sets as the hen was setting and incubation had fairly begun.

The Prairie Hen is a very close setter and is remarkably successful in hatching its full quota of eggs. A set of fifteen eggs if undisturbed is almost sure to be transformed to fifteen chicks—a result seldom realized by the domestic hen. It is all the more remarkable when we think of the nesting site—flat on the ground with neither protection from the cold winds nor shelter from the storms.

I was tramping along a grass plot between two fields (one mile from town) on June 10th of the present season, when I flushed a Prairie Hen from what had formerly been sixteen eggs. I had arrived at the supreme moment and witnessed the transformation scene. The little fellows were just hatching out and catching their first glimpses of the big outer world. First I would see a little bill thrust through the shell—then a crack would start at the opening gradually spreading until the egg fell apart and “*Tympanuchus*” junior would step out as unconcerned as though he were quite used to the proceedings. I was almost ready to pronounce them *matured at birth* when I saw two enterprising youngsters running around with the shells on their backs—so different, for instance, from the blind and helpless little creatures awakening to life in the Robin’s nest.

In a half-hour the full sixteen were released—not an infertile egg in the entire lot. “Little fishes,” thought I, “what a sight this will be for some gunner about September first.” The flock is still there at this time but I am in hopes the gunner will not materialize.

One of the peculiar traits of the Prairie Hen is its extreme “touchiness” regarding its nest. Never have I found an incomplete set of eggs that was not promptly deserted by its owners.

This has become of such frequent and persistent occurrence with us (my fellow oölogist, Dr. Jessee, and myself) that the doctor (for the benefit of other

observers) volunteers a remedy. His advice is that we look only for complete sets on future occasions.

The Prairie Hen is not particular about its nesting sites, the nests being about equally distributed in the meadows and corn fields. Quite a favorite location is near a fence post or low hedgerow between two fields, with a marked preference for the former situation. Unfortunately nearly all the corn field nests are destroyed with the early spring plowing, for few farmers will trouble to plow around them and few of the birds would return to the nests if they did.

The nest proper, when there is one, seldom contains more than a few grass-stems. Ordinarily no attempt at nest-building is made the eggs being deposited in a hollow of a grassy surface.

Frequently when the corn field site is chosen the eggs lay directly on the bare ground and a hard beating rain will often imbed them in the loose soil. It is difficult to understand how these are successfully brought to the hatching point.

The most harassing enemy of “*Tympanuchus*” is the common Crow (*Corvus americanus*)—that agent of destruction so well known and instantaneously recognized by all the birds. A few days since a farmer told me of a Crow and Prairie Hen episode of which he was an eye witness. He was plowing in a field where he had previously located a Prairie Hen’s nest containing fourteen eggs. The nest was beside a fence between two adjoining fields and in consequence was in little danger of being disturbed.

His attention was attracted by an unusual commotion and drawing nearer he saw a fight in which the Hen was bravely defending her property. As he advanced to the rescue (he afterwards saw his mistake) both adversaries flew away. He found the nest sadly disturbed and four eggs punctured

by the Crow's sharp beak. Removing the broken shells he returned to his work. The Prairie Hen, owing to its shy nature, was slow in returning, but before the farmer could plow around the field the Crow (which by the way has never been accused of timidity) had made sad havoc of the remaining eggs.

While gazing over a large meadow early this season I saw a Crow drop suddenly to the earth in a manner so suspicious that I determined to watch developments. He arose and dashed downward, again and again, until a frightened Prairie Hen flushed and flew hurriedly away. The Crow immediately dropped into the grass and it needed no guessing on my part to convince me of what was going on.

I am led to believe from the above incidents that this style of nest-destroying is very frequent and when all the misfortunes in the life of "*Tympanuchus*" are considered it is truly wonderful that they are able to show an increase.

The Prairie Hen is a constant resident with us and spends its whole life in one locality. They begin to flock as soon as the young are able to fly and continue in this state until nesting begins the following spring, when they separate in pairs.

A flock, I am led to believe by their number, is a single family, consisting of parents and young of the year.

One of the most interesting performances of the Prairie Hen is the low drumming noise made by the male at the first signs of opening spring.

If you will examine him closely you will find at either side of the neck a spot devoid of feathers and if you are so fortunate as to get near enough to see this spot in action you will enjoy a novelty indeed. As the cock struts to and fro displaying his many charms before a bevy of admiring females, these bare spots are distended until they quite resemble toy balloons. The drumming noise is made by expelling the col-

lected air through the mouth.

On still mornings it can be easily heard at a distance of three or four miles and beginning about four o'clock is continued with marked regularity until six or after. It is one of the first bird notes of spring, and referring to my notes I find February 20th about the average date. The present season I heard the first drumming on February 11th, which is my earliest record.

The long drawn out "*Boo-roo-roo*"—is difficult of description and perhaps can be no better transposed into English than by using the phrase generally attributed to it by the boys in this locality, "*You-ole-fool*." While we may not sympathize with his ungallant way of announcing to the sleeping world the birth of a new day, may not father "*Tympanuchus*" be forgiven for occasionally using the expression? Perhaps it is his only way of protesting against the farmer's provoking custom of turning his nest over in the furrows.

To see him in his most interesting moods—when the determined swains meet in battle royal, to decide the great question as to which shall be "*cock of the flock*" and "*lord of the realm*," the successful one of course claiming his choice of the females for his mate—will occasion many wearisome and disappointing trips. When at last you have crawled on hands and knees to the early morning rendezvous, irrespective of the sticky surface and garment-soaking dews, and have gazed upon proud "*Tympanuchus*" dragging his wings stiffly on the ground—when you have watched the excited, cackling females encouraging their lords to battle and have heard their wild, nerve-destroying laughter—for all the world like the babble of a gathering of maniacs—you will have felt rewarded for your trying exertions.

You will have seen a performance given to no human eyes but *he* who is willing to sacrifice personal comfort

and early morning naps and who *will* not be denied.

ISAAC E. HESS,
Philo, Ills.

A Pair of Cactus Wrens.

On the seventh of March, 1899, I found a Cactus Wren's nest containing four eggs. Now there is nothing remarkable about this, save that it prefaces the taking of a remarkable series of eggs from one pair of these interesting little birds. I left the set two days, and then, on the 9th, as no more eggs had been laid, I took the set, which proved to be about four days incubated. The nest was, by actual measurement three and one-half feet from the ground and was the only nest in this particular group of cacti clumps, which cover about two acres of the hillsides near my home here in the heart of the Southern California Oil Field. In this case then, no decoy nest had as yet been built, probably for the reason that no collector had ever disturbed their retreat before.

Three or four days later they commenced operations on a second nest, from which, on the 22d of the same month, I took four eggs, incubation one day. This nest was built four feet from the ground in a clump of cacti about fifty feet from the first nest.

They then selected one of the decoy nests (I neglected to state that three or four very poor nests were built, though not lined with the usual heavy lining of feathers, at varying distances from the second nest) and on the 4th of April I took my third set, this time of five eggs from the nest placed three and one-half feet up in cactus. It will be noticed that the differences between the first and second sets, and the second and third sets were equal, viz: thirteen days. So when thirteen days elapsed, I, after some searching, located their fourth nest only two and one-half feet

up in low cactus. This time it held four eggs, but in taking them from the nest I succeeded in breaking two. I thoroughly cleaned the nest from bits of shell and blood-soaked feathers, leaving the two whole eggs. She laid a third the next night (evidently the full set would have been *five*) Then after the lapse of another day and night I took the three eggs. One decoy nest was built in this case, but seemed to differ from usual decoy nests in that it was but a few feet from the home nest and was warmly built and lined throughout. Heavy rains came on about this time and I think the male bird used this extra nest for his roosting place at night. At any rate I have often flushed him (or her (?)) from it on my daily trips to the nest.

After I took this set the pair were idle for two days and then roofed over a deserted Mockingbird's nest in an elder tree near by. In this the female laid one egg. I left it three days, and as the birds were never seen, notwithstanding the fact that I went to the nest on three different nights, I took the one egg. This nest was about ten feet from the ground and no decoy nests were built. Now it happened that (this I learned afterward) a neighbor had found *this* nest a day or two before I went to it and took from it four eggs. Thus her fifth set was of five eggs. My data for the one egg was May 3d.

Just eight days later, May 11, I took my sixth set, consisting of five eggs, from the nest which I mentioned above as the probable roosting place of the male bird at night.

Thirteen days afterward they had built an entirely new nest and laid their seventh set, this time of four eggs. The nest was placed ten feet from the ground in the same elder tree mentioned before. No decoys were built, and on May 24th I took this set.

Next time they moved to another

elder tree about 300 yards over a low ridge into another canyon. Here they built a bulky nest some fifteen feet up, from which on the 8th day of June I took five eggs, incubation very slight, minute bloody traces being visible in the yolk and white of the eggs.

This last, it will be remembered, was their eighth set. Now for their ninth set they changed the entrance of their nest which had held the seventh set to another side and relined the nest. On the 18th of June I took from this nest a complete set of four eggs.

Where they then went I do not know, but there is a pair at present nesting on this hill. They have raised one brood already and a day or two ago presented me with a fine set of five fresh eggs.

Here then were nearly twenty nests built and forty-one eggs laid in the short period between March 9 and June 18—or three months and nine days, something over one hundred days.

The eggs seem to be quite uniform both in size and manner of markings. The intensity of color, however, shows a gradual decrease from deep salmon red to a very weak pink. I have noticed, however, in a series of Pacific Horned Owl eggs taken from one pair of birds this year and consisting so far (they are still laying) of one set of five, two sets of three and one set of two, that there is a perceptible decrease in size of the eggs.

HARRY H. DUNN,
Fullerton, Calif.

May 10, 1900.

Birds Observed within the Corporation of Kalamazoo, Mich.

The corporation is at present two and three-quarters by three miles in size, but in past years was smaller. There are many changes and many species once abundant within our boundaries are now seldom or never seen. These observations extend over a period of more than thirty years.

The species found breeding within the corporation are marked with a *.

Nos. 1, 2, 3, etc., refer to foot-note.

Horned Grebe 1
Pied-billed Grebe
Great Northern Diver
Red-throated Diver
American Herring Gull
Ring-billed Gull 2
Bonaparte's Gull
Wilson's Tern
Double-crested Cormorant 3
American Merganser
Mallard
Wood Duck
Pintail Duck
Ring-neck Duck
Butter-ball Duck
Golden-eye Duck
Old Wife Duck 4
Whistling Swan
American Bittern
Great Blue Heron
Carolina Rail *
Virginia Rail
American Woodcock *
Wilson's Snipe
Grass Snipe
Bonaparte's Sandpiper
Least Sandpiper
Semipalmated Sandpiper
Greater Yellow Legs
Solitary Tattler
Field Plover
Buff-breasted Sandpiper
Spotted Sandpiper *
American Golden Plover
Killdeer Plover *
Semipalmated Plover
Bob White
Ruffed Grouse *
Prairie Hen
Wild Turkey 5
Wild Pigeon * 6
Mourning Dove *
Turkey Vulture 7
Marsh Hawk
Sharp-shinned Hawk
Cooper's Hawk *
American Goshawk 8
Red-tailed Hawk *
Red-shouldered Hawk *
Broad-winged Hawk
Bald Eagle
American Sparrow Hawk *
American Osprey 9
Barred Owl
Saw-whet Owl 10
Screech Owl *
Great-horned Owl *
Snowy Owl
Yellow-billed Cuckoo *
Black-billed Cuckoo *
Kingfisher *
Hairy Woodpecker *
Downy " *

Yellow-bellied Woodpecker			White-rumped Shrike *
Red-headed	"	*	Red-eyed Vireo *
Red-bellied	"		Warbling " *
Golden-wing	"	*	Yellow-throated Vireo *
Whippoorwill *			Solitary "
Nighthawk *			Black and White Creeper
Chimney Swift *			Nashville Warbler
Ruby-throated Hummer *			Tenn: ssee "
Kingbird *			Parula "
Great-crested Flycatcher *			Yellow " *
Pewee *			Black-throated Blue Warbler
Wood Pewee *			Myrtle "
Olive-sided Flycatcher 11			Magnolia "
Acadian	"	*	Chestnut-sided "
Trail's	"	*	Bay-breasted "
Least	"	*	Black-poll'd "
Horned Lark			Blackburnian "
Prairie Horned Lark *			White-browed "
Blue Jay *			Black-throated Green "
Crow *			Pine "
Bobolink *			Palm "
Cow Bunting *			Prairie "
Red-winged Black bird *			Oven Bird *
Meadow Lark *			Large-billed Water Thrush
Orchard Oriole *			Maryland Yellow-throat *
Baltimore Oriole *			Hooded Warbler
Rusty Blackbird			Wilson's "
Bronzed Grackle *			Canadian "
Evening Grosbeak 12			American Redstart *
Pine	"	13	American Titlark
Purple Finch			Catbird *
American Crossbill			Brown Thrush *
White winged Crossbill 14			Bewick's Wren 15
Lesser Redpoll			House " *
American Goldfinch *			Brown Creeper
Pine Siskin			White-bressted Nathatch *
Snow Bunting			Red-bellied "
Lapland Longspur			Black capped Chickadee *
Grass Finch *			Golden-crowned Kinglet
Savanna Sparrow			Ruby-crowned "
Yellow-winged Sparrow			Blue-gray Gnatcatcher *
White-crowned	"		Wood Thrush *
White-throated	"		Wilson's "
Tree	"		Swainson's Thrush
Chipping	"	*	Hermit "
Field	"	*	Robin *
Black Snowbird			Bluebird *
Song Sparrow *			
Swamp	"		
Fox	"		
Towhee *			
Rose-breasted Grosbeak *			
Indigo Bunting *			
Black-throated Bunting *			
Scarlet Tanager *			
Purple Martin *			
Eave Swallow *			
Barn	"	*	
Tree	"	*	
Bank	"	*	
Rough-winged Swallow			
Cedar Bird *			
Northern Shrike			

MORRIS GIBBS, M. D.,
Kalamazoo, Mich.

FOOT NOTE:

- 1 Only one seen.
- 2 Rare.
- 3 Straggler.
- 4 Small flock in city.
- 5 Now nearly extinct in country.
- 6 None seen in years.
- 7 First appeared over twenty years ago; at present not rare.
- 8 One taken many years; rare.
- 9 One taken.
- 10 One taken; rare.
- 11 One seen and heard.
- 12 Rare straggler.
- 13 In large flocks two seasons.
- 14 Occasional; straggler.
- 15 Rare straggler.

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This Collection contains Forty Small Shells collected from all quarters of the Globe. all of which are numbered to correspond with a catalogue, which gives their proper, common and scientific names, with the locality where found. These shells when purchased individually and properly labelled would cost from 2 to 25 cents each. The following are the specimens found in this collection:

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VOL. XVII. NO. 10.

ALBION, N. Y., DEC., 1900.

WHOLE No. 171

Wants, Exchanges, and For Sales.

Brief special announcements, "Wants," "Exchanges" "For Sales," inserted in this department for 25c per 25 words. Notices over 25 words, charged at the rate of one-half cent per each additional word. No notice inserted for less than 25c. Terms, cash with order.

Strictly First-class specimens will be accepted in payment at one-third list rates.

What's Your Number?

Examine the number following your name on the wrapper of this month's OÖLOGIST. It denotes when your subscription expired or will expire.

No. 170 your subscription expires with this issue

175	"	"	"	"	Apr., 1901
180	"	"	"	"	Sept., "
184	"	"	"	"	Dec., "

Intermediate numbers can easily be determined. If we have you credited wrong we wish to rectify.

TO EXCHANGE:—500 rare and common sets for desirable U. S. postage and revenue stamps. Send list and receive mine. PHILO W. SMITH, JR., Mona House, St. Louis, Mo.

WANTED:—A Snowy Owl in the flesh. Cash. F. M. RICHARDS, Farmington, Maine.

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I WILL PAY 12 cents each cash for the following eggs: 12, 29, 64, 104, 120c, 139, 226, 258a, 309, 331, 364, 402, 453, 554, 567a, 586, 591, 636, 657, 675, 684, 731, 735a, 738, 742, 751a. C. J. TIFFANY, Lyons, N. Y.

FOR EXCHANGE:—Sets of 7, 11, 13, 30, 35, 37, 47, 90, 155, 187, 223, 226, 269, 271, 302, 487, 578 and many others. All answered. A. E. PRICE, Grant Park, Ills.

WANTED:—"Birds of Minnesota" by P. L. Hatch. State lowest cash price. IRVING L. CONDIT, 819 Pen Ave. N., Minneapolis, Minn.

WANT Minerals, Stamps, Autographs, Nests with Eggs, rare Singles, Foreign Copper Coins, Medals, Arrowheads, Curios for Autographs or Stamps. W. P. YOUNG, Portsmouth, N. H.

FOR SALE.—Bird Skins at ½ list rates. Tufted Puffin, Ancient Murrelet, Marbled Murrelet, Ruddy Duck, Harlequin Duck, Lesser Snow Goose, Reddish Egret, also mounted birds. Send for lists. O. S. Biggs, San Jose, Ill.

FOR SALE!—40 sets of Burrowing Owl A No. 1 and 120 different singles and other sets cheap. F. W. COLLINS, Garden City, Kan.

FOR EXCHANGE.—Mounted birds, minerals, shells, relics and rabbits for specimens not in my museum, cornet, shot gun, rifle, revolver, camera. Correspondence solicited. BRIAR HILL MUSEUM, Sebring, Pa.

FOR SALE.—Fine sets of Pied-billed Grebes in sets of 5 and 6 eggs. Price 5 cents per egg, prepaid. ROY H. BULLIS, Winnebago City, Minn.

GUINEA PIGS, pet coyote, bird skins, magazines and books to exchange for Indian relics, bird skins, snake skins, mammal skins, firearms, curios. STEPHEN VAN RENSSELAER, JR., West Orange, N. J.

FOR SALE.—Complete file of "The Osprey," 1 pair climbers, eggs in sets with data, a few fine skins, etc. Stamp for lists. HARTLEY H. T. JACKSON, Box 87, Milton, Wis.

OWL EGGS! Why not increase your egg collection by adding a fine set of Burrowing Owl? Sets of six to eleven eggs prepaid for 4c per egg. F. W. COLLINS, Garden City, Kans.

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FOR EXCHANGE.—For eggs sets (2 eggs) of 420c, singles 501. 703, I desire sets or singles, rather common, with data. DONALD B. OHLINGER, Haines City, Polk Co., Fla.

FOR EXCHANGE.—First class sets and singles with data to exchange for eggs not in my collection. Send your list and receive mine. All letters answered. V. L. SMITH, R. D. No. 1, Ottawa, Kans.

FOR SALE or EXCHANGE.—First class sets and singles for sets. Send list and receive mine. Fine minerals, shells and fossils for sale cheap. RAY F. STEVENS, Shabbona, Ill.

FOR EXCHANGE:—Edison Home Phonograph, full equipment and 3 dozen records all nearly new, also one 4x5 new "Korona" camera. Wanted Long-focus Camera (4x5 or 5x7) in like condition or rare eggs in sets. THOMAS H. JACKSON, 343 E. Biddle St., West Chester, Penn.

PLATE HOLDER.—Double, $5\frac{1}{2} \times 5\frac{1}{2}$, Blair Camera Co., (\$1.00), prepaid 34c. FRANK H. LATTIN, Albion, N. Y.

AGENTS WANTED. German Electric Razor Hone, guaranteed to equal the best hone made. Can use water, oil or lather. Will last a lifetime. Each Hone packed in a neat cardboard case. Every one perfect. Just the thing for private use. Price 75c. We want an agent in each township to whom exclusive sale will be given. Write for sample and agent's outfit. Sent by mail. A money coin. Address MARSH MFG. CO., No. 542 West Lake St., Chicago.

CODDINGTON MAGNIFIER (Miners' glass), diameter $\frac{5}{8}$ in. cost \$1.50, prepaid 95cts. FRANK H. LATTIN, Albion, N. Y.

"SNAPS" for TAXIDERMISTS ET. AL:—Chain and Hooks (25c), 16c; 7in Stuffers, spring handle (1.25), 80c; Scissor-handle Stuffers, 12in. (\$1.75), 1.05; Scissor-handle Stuffer, 15in. (\$2.50) \$1.60; Bone Cutters, extra fine and heavy, (\$2.50) \$1.60; Forceps for Insects (\$1.25) 78c; Botanical Collecting Can with shoulder strap, size $12 \times 7\frac{1}{2} \times 3\frac{1}{2}$ in. (\$1.50) \$1.10; Tenaculum or Dissecting Hook, folding in handle (\$1) 28c. All prepaid at prices quoted, regular prices in (). FRANK H. LATTIN, Albion, N. Y.

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WANTED.—Buyer for case stuffed birds. One (each) Hoot Owl, Screech Owl, Barn Owl, Blue Jay, Pheasant and young, Snipe, two Wild Pigeons, three Wild Ducks, Quail, Blue Jay, Redbird, Hummingbird, Mink, Gray Squirrel, Red Squirrel, Alligator and several others, 30 in all; elegantly mounted. Make an offer. F. W. GATES, Chattanooga, Tenn. 172

BENDIRE'S LIFE HISTORIES I and II and balance in cash for complete list of The Auk. J. O. SNYDER, Stanford University, Calif.

WANTED.—Winchell's Walks and Talks in the Geological Field. State condition and price. C. M. SLAYTON, Grattan, Kent Co., Mich.

MAYNARD'S "Birds of Eastern North America." This elaborate work was published about 25 years ago at \$18.00 and contained 532 pages. I have three parts of this valuable work, each containing about 300 pages (over $\frac{1}{2}$ of original) bound in tag-board covers. The Thrushes, Warblers, Starlings, Water Birds and Shorebirds are complete, will sell at only \$3.00 per copy prepaid. I also have 3 copies each containing about $\frac{1}{4}$ of original work at \$1.00 per copy prepaid. I have 10 of original hand-colored plates at \$1.50 for lot. Sample pages of work for stamp. Style of text see article of "Black Duck" in this OÖLOGIST. FRANK H. LATTIN, Albion, N. Y.

CHOICE southern sets of Royal Tern, Brown Pelican, Willet, Wilson's Plover, Laughing Gull, Clapper Rail, Black Skinner for sale very cheap or exchange sets or singles. DR. M. T. CLECKLEY, 457 Greene St., Augusta, Ga. 3t

WANTED.—Sets of eggs containing abnormal specimens, such as runts, albinos, monstrosities, abnormally colored or shaped eggs. Will give cash or good exchange. J. WARREN JACOBS, Waynesburg, Pa. 101

EXCHANGE.—For eggs in sets or singles, many common, new $3\frac{1}{2} \times 3\frac{1}{2}$ Camera, Spectroscope; Eggs in sets. ERNEST H. SHORT, Box 173, Rochester, N. Y. 171

I send you today some ads for your excellent paper. I must say that ads in your paper always pay.—CHRIS P. FORGE, Carman, Manitoba.

HEAR YE! Hear Ye! Hear Ye! This is to certify that my advertisements in the OÖLOGIST have paid me better than have the combined ads. in most of the amateur and natural science papers. Ads. in the OÖLOGIST always bring returns, and it is safe to say that there is no paper having three times the circulation of this widespread periodical which can give equal satisfaction. MORRIS GIBBS, M. D., Kalamazoo, Mich

MAKE MONEY.—By securing a county agency for our New Edition of the Reversible U. S. and World Map. This map is 66×46 in. in size, being the largest one-sheet map published; mounted on sticks ready to hang; eleven beautiful colors. One side shows a grand map of our great country and inset maps of its new possessions. The other side shows an equally good map of the world. On receipt of \$1.25 we will send a sample copy by prepaid express, and will inform you how to obtain a trial agency. Our men clear from \$15.00 to \$35.00 weekly after a month's work. Maps can be returned if not satisfactory. Yours truly, RAND, McNALLY & COMPANY, 160-174 Adams St., Chicago, Ills. 172

FOR SALE:—Clutches of European species, White Gryfalcon, Gryfalcon, Merlin, Green Sandpiper, Greenshank, Golden Eagle, Gray Sea Eagle, Kestrel, Sparrow Hawk, Honey Buzzard, Peregrine Falcon, Hobby Egyptian Vulture. Apply. GORTON, 2 Upper Gloucesters Ter St., Pendleton, England. 171

"I don't know whether my ad. has reached its time limit yet or not, but stop it any way. My supply of exchange material was exhausted some time ago and replies to the ad. still come in. F. P. DROWNE, 20 Benefit St., Providence, R. I.

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WANTED.—Will pay cash for Albinos, either birds or small animals. Write me what you have and condition and lowest cash price. J. E. GROSJEAN, Lima, Ohio. 171,

WANTED.—Correspondents in every county of New York, who can furnish complete annotated lists of the birds occurring in their locality. Also to correspond with all bird students in the east having photographs of birds, birds' nests and eggs. DR. MARCUS S. FARR, New York State Museum, Albany, N. Y.

\$5.00 for only 50 cents.

For 1901 Subscribers of THE OÖLOGIST only.

While "taking inventory" we found many items in very large quantities—enough to last the ordinary Curio Dealer a life-time and in such quantities that we cannot job them off to dealers except at a sacrifice—and rather than give dealers the benefit of the same we prefer and have concluded to give this benefit to the 1901 subscribers of the OÖLOGIST. Those who have paid their subscription to the OÖLOGIST for 1901 or who remit for same when accepting this "\$5.00 for 50cts" offer—we will send by express at their expense (we can send prepaid for 25cts.) all of the specimens and books listed below for ONLY 50cts.

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2. Egg of Skate or Sand Shark, Martha's Vineyard.....	05	16. Fossil Polyp Coral, New York.....	15
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9. One-half dozen Alligator Teeth, Indian River, Fla.....	25	23. Lattin's "Catalogue of N. A. Birds Eggs".....	10
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11. Compass or Sunflower Starfish, Chili.....	35	25. Tassin's "Directions for Collecting Minerals".....	05
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\$5 00

No changes or alterations of any kind can be made in this offer—you either accept or not as you may elect. The offer is no fake nor catch penny scheme but is made as stated and in good faith in order that *many* may share in the benefit which would otherwise fall to a few, and incidentally to increase the OÖLOGIST'S subscription list. This premium offer cannot be duplicated for double what it costs the 1901 subscribers to the OÖLOGIST by any dealer in America—the publisher of the OÖLOGIST included—after present supply is exhausted.

REMEMBER. 1st. That if your subscription to the OÖLOGIST is already paid through 1901 you get the entire lot of specimens, etc., offered above for only 50cts. But if you wish them sent prepaid you must send 25cts additional or 75cts. in all.

2d. If you have not subscribed for the OÖLOGIST for 1901 and wish to accept this offer you must send 50cts. for OÖLOGIST with coupon for 1901 and 50cts. for this offer or \$1.00 and if you want the lot sent prepaid add 25cts. more or \$1.25 in all.

3d. This offer is made in connection with a subscription of the OÖLOGIST only. The paper and premium can be sent to the same or different addresses as desired. In case you wish the premium without the OÖLOGIST or wish to secure a second premium the price will be \$1.00 or \$1.25 if sent prepaid.

Remit in most convenient manner. Address plainly and in full.

FRANK H. LATTIN, ALBION, N. Y.

TC EXCHANGE.—Seventy-five dollars (\$75) worth of first class sets from Southern California for a new Kodak or Camera and outfit. B. M. FRANKLIN, Pasadena, Cal.

Want back numbers of "Auk" and "Oologist" '94, '95, '96. Have to exchange, 263 4-4, 1-3, 339 1-3, 1-2, 390 1-7, 423 2-5, 456 1-5, 466a, 1-4, 2-3, 529 1-5, 540 1-3, 687 2-4, 1-3. Will pay part cash. L. W. TERRILL, Robinson, Bury, Compton Co, Quebec Canada.

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ROCHESTER, N. Y.

(Formerly Albion, N. Y.)

To whom it May Concern:

During the past eight months I have been House Physician and Surgeon at the Erie County Hospital, (Buffalo, N. Y.) consequently all matters connected with my old business, and demanding my personal attention, have been at a stand still.

My term of service expired on December first. Since that date and during the balance of the month my time will be devoted to straightening matters pertaining to my old work and to arranging, inventorying, cataloging and pricing the material I have remaining on my hands (which in the aggregate will amount to several thousand dollars).

On and after January 1, 1901, the demands of my profession will come *first* and my entire time will be devoted to the same, if required. My Natural History work will then be of a secondary nature.

However, everything in the line of Specimens, Books, Supplies, etc., which I have left will be priced, catalogued and offered for sale AT VERY LOW RATES early in the New Year. The disposition of the same will be under my personal supervision, and the filling of orders, packing, etc., will be attended by able assistants, who have been with me in that capacity for years.

If there has been anything connected with our business relations in the past which has not been to your entire satisfaction and which you attribute as due to some fault or oversight of mine, I wish to rectify the same at once.

Faithfully,

FRANK H. LATTIN.

Albion, N. Y., December 8, 1900.

The above is self-explanatory and tells "WHY," "WHEN," and "WHERE." A catalogue will be issued as soon as our inventory has been completed and copy can be prepared for our printer.

THE OÖLOGIST will be issued regularly on the first of each month during PAN-AMERICAN year, and *possibly* on the 15th in addition, making it *semi-monthly*—in which case announcement will be made in January issue and terms of subscription will not be advanced.

THE OÖLOGIST.

VOL. XVII. NO. 10.

ALBION, N. Y., DEC., 1900.

WHOLE No. 171

THE OÖLOGIST.

A Monthly Publication Devoted to

OÖLOGY, ORNITHOLOGY AND
TAXIDERMY.

FRANK H. LATTIN, Editor and Publisher,
ALBION, N. Y.

Correspondence and items of interest to the student of Birds, their Nests and Eggs, solicited from all.

TERMS OF SUBSCRIPTION:

Single subscription.....50c per annum
Sample copies.....5c each
The above rates include payment of postage.

Each subscriber is given a card good for a Want, Exchange or For Sale Notice. (This card is redeemable at any time within one year from date thereon.)

Subscriptions can begin with any number. Back numbers of the OÖLOGIST can be furnished at reasonable rates. Send stamp for descriptions and prices.

Remember that the publisher must be notified by letter when a subscriber wishes his paper stopped, and all arrearages must be paid.

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12 lines in every inch. Seven inches in a column, and two columns to the page.

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FRANK H. LATTIN,
Albion, Orleans Co., N. Y.

ENTERED AT P. O., ALBION, N. Y. AS SECOND-CLASS MATTER.

Bird Music

All birds that I have met with have means of expressing themselves by sound, and though many are far from entertaining to man, it is reasonable to admit that the discordant caw of the

crow is as expressive to its mates as is the bubbling melody of the Warbling Vireo to the little Greenlets, or the guttural honk to the Herons. These songs, call-notes and twitterings differ to a wide degree in the various species, but are nearly identical in birds of a kind-tending to prove that the notes constitute a language, or at least a method of communication.

There has appeared a work, which, I understand, attempts to demonstrate the existence of a language among our near relatives, the monkeys. I do not doubt that a language exists sufficient for their requirements in every respect, but we are denied the privilege of comprehending it in the least degree. In fact the notes of birds are as intelligible to our ears as the chattering of monkeys, and taken in connection with their movements are as expressive of their desires as the sounds made by any animal we know. Then too, granting that a language exists with each species of animal and bird we must admit that the single croak of the Raven comprehends as great meaning as the single faint chirp of the gorgeous Hummingbird, and the estatic warble of the Bluebird is equally expressive with the discordant gutturals of the Herons or the weird cry of the Loon.

There is much that is worthy of observation in the songs of birds and the time spent in the study of them cannot fail to furnish entertainment. Aside from the pleasure of the true music, we may draw comparisons between the varied ditties, and also the ability is given us to liken many of them to the words of our language. It is this association of the bird with its notes, expressed in words, which often leads us

to name the songster. This is well exemplified in the names Whip-poor-will, Kill-deer, Bob-white and a dozen others. Then there are scores of others which are known by meaningless names; names, however, which are familiar to us and which almost exactly express the call-notes or songs. Under this class we find the Chick-a-dee, the Chebec, Plum-pud-den and Peet-weet.

Many of these notes can be greatly varied and still meet our requirements, but we have relied upon them so long that usage makes them next to indispensable. When in the south I first heard the notes of the Chuck-will's-widow, a species nearly allied to our northern Whip-poor-will, but could not fully satisfy myself that the name and notes corresponded, but after becoming familiar with the nightly serenades, the notes resolved into the accepted name. Northern-born people who have moved to the South nearly all call this species the Whip-poor-will, not recognizing the difference in the notes; yet, surely, if the songs differ to an extent equal to the English pronunciation of the names, then the difference ought to be quickly recognized.

To one familiar with the songs and call notes of our birds, the association of the sound with the performer is instantaneous on hearing it. Nevertheless it is quite a rare thing for a stranger to identify a species by its notes, no matter how much alike are its name and notes. Yet it is easy for all to recognize the Jay-jay in which the harsh screams of the Blue Jay, after the attention has been called to it. No better name could describe our little dooryard flycatcher than the sound Phoebe, and yet it is also called Pee-wee as well, and both from a fancied resemblance to its short song.

I have tried to copy the familiar Robin's song many times, but have discarded all attempts as regards English words. Still the following, as some ob-

servers may fancy, fairly describes the soft utterances: "*keeler-keeler-henry; william-william-henry; william-henry-keeler*," and so on indefinitely. The Meadowlark is flying over the field or wading about in the grass utters in a plaintive key the words "*dear children*". If we pass near a marshy tract we hear the Redwings uttering their quick call-note, as they fly above their nests in the rushes, or the male ruffling himself on a branch will issue his *cher-e-e-e*. From a clump of bushes near come the notes *ka-wee-chy*, uttered from four to nine times by the Maryland Yellowthroat. He then dives into the brush and rank grass and gives us a series of fine scolding notes. As we pass he challenges us with *tackle-me tackle-me*, or as you may call it, *witchey-witchey*. The Bronzed Grackles are calling to one another *spank-spank*, and now and then a lustrous male grinds out *schleranch*, repeating it three times, to which Mrs. Grack's replies with *schlee-ree scree-serve*, which is the extent of their musical ability.

Away out in the marsh are a couple of those queer birds, the thunder pump-er, as the American Bittern is often called. The name is given from their peculiar movements made when singing, so to speak. The song of spring and love floats to us in thunderous undulations, *plum-pud-den* repeated four to six times. This bird often called the stake-driver, has another peculiar note or song from which it gets one name. The sound is exactly like *ka-whack*, uttered from three to six times and closely resembles stake driving with a maul. So perfect is the resemblance that it is a common occurrence for a stranger to the bird to look about for a laborer at work. From the lake come the wild, unearthly notes of the Loon or Great-Northern diver, *ko-a-whce-loo-loo*, or again, *key-hoc* reverberating and penetrating.

Returning towards the farm house,

✓ we pass close to a cock, Bob-White which heralds that he is *bob-bob-white*, from the top of the fence. Very few strollers are aware that this species says bob twice, but those who observe at close quarters will detect it at once though the first bob is so indistinct as not to be heard at a distance. Passing through a dense piece of woods, a number of Acadian flycatchers are seen and their notes *kee peek-up* are heard all about. Above, in the shady top of a ✓ tree a Wood Pewee is pouring forth his melancholy refrain, *pee-hee-o-wee-bee-wee*; slowly issuing with plaintive, lingering quaver, which causes one to think the dear little singer unhappy. But it is not so, as it is its love song and answers the same purpose as the pathetic, resonant song of the happy Mourning Dove.

Emerging from the woods we listen to the loud clattering song of the Baltimore Oriole in rivalry with the gushing melody of the Rose-breasted Grosbeak. Both of these birds, as well as the Indigobird near at hand have songs that it is impossible to describe on paper. There are many songs of birds which no power of the pen can describe and we can truthfully say that the best of bird melodies are those which cannot be transferred to paper. This then, is an acknowledgement that bird music is of a superior quality, and the feathered tribe is possessed of factors in the realm of harmony which we are unable to criticize.

There are nearly fifty species of Michigan birds which have songs of merit, but if they were fully described, no one not familiar with bird notes would recognize a bird by its song description.

That there is an expression of feeling in the notes of all of our birds no true lover of our feathered friends will attempt to deny. We are willing to admit the existence of a bond between them and us, and this assumption of a higher relation we do not care to

have destroyed or dispelled by an opinion against the sentiment of our dear little associates. Nevertheless, although I am anxious to invest these creatures, "favorites of creation," as Figuiet so beautifully terms them, with higher attributes of feeling and expression, it remains a fact that their notes do not change in quality as a result of change in emotion, so far as we are able to judge. Let us consider some instances.

A pair of Robins will make a great outcry if their nest is molested; the excited notes of the male corresponding to the battle cry when the birds are mating. Other Robins join the hue and cry and the neighborhood of bird-dom is aroused, for the birds understand and all lend their sympathy and bluster. If the nest is robbed the pair quickly subsides, and the male will probably be singing the same evening; surely the next morning. Within a few days a new nest is begun in the same neighborhood or the old one is again occupied, the song continually proclaiming the joy of the happy pair, so far as we can judge.

I have carefully noted the actions of the bereaved birds in many cases and it is always about the same. In one instance where a nest of the Warbling Vireo was robbed the male quickly returned to the vacant nest and there sang with the greatest joy apparently, for it is the habit of the male of this species to sing on the nest. It may be that the song expressed sorrow, or at least a complaint, but to me the same ecstatic warble was heard that was always given to my ears. I have watched in the vicinity of the nests of the Scarlet Tanager, Rose-breasted Grosbeak, Wood Thrush, Hermit Thrush and Indigo-bird, all fine singers, and have observed that all apparently quickly recovered from the effects of spoliation and sang within twenty-four hours after. In each in-

stance the male tuned up and sang as sweetly as ever.

The species of birds that sing when flying are very few. Of the many birds which utter simple sounds on the wing I am not speaking, for they are in large numbers. If we consider notes of birds an expression of sentiment, then all sounds may be called songs, especially may this be considered true of spring notes. Admitting this, then there are over one hundred species which sing as they fly.

All of the hawks and other rapacious birds that I am acquainted with, utter their discordant cries and screams when upon the wing; the Red shouldered, Marsh and Cooper's Hawks and the Screech and Barred Owls being especially noisy in season. All of the herons utter their guttural notes when on the wing, although the more difficult notes of the greater bittern are not given on the wing. The smaller waders give utterance as they fly, and most of the ducks have been heard, while the geese are notorious gabblers during migrations. Sandhill Cranes issue their notes as they sail, sometimes out of sight. Nighthawks make their only efforts while on the wing, as we should expect with a species which earns its entire living while flying. Its near relative, the Whippoorwill sometimes flies singing through the woods in spring.

The woodpeckers are a noisy set, and without an exception issue the clatter which answers in the nature of a refrain, on the wing. All hunters have heard the "scape" of the Wilson's Snipe, the single note of the flying Woodcock and the agreeable efforts of the Killdeer Plover, Spotted Sandpiper and the Upland Plover, the latter really musical, and many others of the smaller waders.

In the RASORES or scratchers we have a silent list of birds when flying, though the Mourning Dove, Bobwhite and some others are noisy on the perch.

According to classification, the true singers are confined within the division OSCINES while all others are considered non-musical according to this arbitrary rule. This system, constructed from anatomical relations, cannot admit the sweet refrain of the Wood Pewee as a song, as the Pewee belongs to the screamers, and of a necessity this is unfair.

Among the birds which are acknowledged singers the following seven musical species are presented as birds which I have heard sing while flying. The Bobolink is the acknowledged leader in flight song, in fact his rollicking, jingling medley is about equal in excellence with any bird with which I am acquainted. The common Bluebird is a charming exponent of flight singing. It occasionally flutters upward and pours forth its soft warble in a most enchanting manner just after arriving from the south.

The Warbling Vireo, rarely, in a transport of bliss, during the mating season, launches into the air while yet singing, and apparently forgetful of custom, strives to make us, mundane creatures, as happy as itself. This agreeable songster is one of my favorites, and no one who is a lover of bird melody can remain indifferent to its ecstatic warblings.

In May and June we sometimes hear the loud gushing song of the Rose-breasted Grosbeak as the gaudy male flits through the foliage near his prospective home. Even with this undignified flyer, who generally progresses by undulating, vigorous dashes, we can detect a hesitating flutter when the bird sings on the wing,

MORRIS GIBBS, M. D.

Kalamazoo, Mich.

(To be continued)

Black Duck.

Anas obscura GM., Syst. Nat. I; 1788, 541.

DESCRIPTION.

SP. CH. Size, large. Form, robust. COLOR. *Adult male*. Dark-brown throughout streaked on head, neck, and abdomen with pale reddish-yellow; and feathers of remainder of body, especially below, edged with yellowish. Under wing coverts, axillaries, and tips of secondaries, white. Speculum, green with violet reflections, surrounded by black. Feet, greenish-yellow. Iris, brown. Bill, greenish-brown. *Adult female and Young*. Similar, but paler. *Nestlings*. Above, including stripe behind eye, yellowish-brown, with several spots of buffy-yellow. Beneath, pale buffy-yellow.

OBSERVATIONS.

Readily known by the universally dark colors. Florida specimens are not only smaller in size, but are lighter in color than Northern birds, the number of tail feathers is less, and there are longitudinal streaks above of yellowish in males. Distributed, in summer, throughout Eastern North America, from Labrador to Texas; winters from Massachusetts, south.

DIMENSIONS.

Average measurements of specimens from North America. Length, 22.50; stretch, 35.80; wing, 10.50; tail, 3.38; bill, 1.90; tarsus, 1.85. Longest specimen, 24.00; greatest extent of wing, 37.50; longest wing, 11.00; tail, 3.50; bill, 2.10; tarsus, 2.15. Shortest specimen, 21.00; smallest extent of wing, 34.00; shortest wing, 10.00; tail, 3.12; bill, 1.75; tarsus, 1.60.

DESCRIPTION OF NESTS AND EGGS.

Nests, placed on the ground in marshy places, composed of grass, weeds, etc. *Eggs*, six to ten in number, elliptical in form, and greenish-brown in color. Dimensions from 1.40 x .225 to 1.75 x .235.

HABITS

The Black Ducks are, perhaps, the most abundant of the River Ducks in our section, and I have always found them common and breeding, in suitable localities, wherever I have been, between the Gulfs of St. Lawrence and Mexico. In the North, however, these birds are migratory, for although specimens occur quite commonly in Massachusetts all winter, they are birds which breed further north, and are noticeably larger than those which live with us in summer, and which have retreated further south during cold weather. In Central Florida, I discovered a local race which is very yellow in color, and which is constantly resident in the State, where they are remarkably abundant. I found them breeding on Indian River, the nests being placed on the drier portions of the marshes, in grass which was about eighteen inches high. The eggs were deposited during the first and second weeks of April; then about the first of May, I would frequently see flocks of little downy ducklings, following the female, but unless I took care to conceal myself, I did not enjoy watching these little families long, for as soon as the parent became

aware of my presence, she would emit a chuckling note, when away they would scamper, helter-skelter, into the nearest grass, where it was impossible, upon the most careful search, to discover a single young. I once surprised a brood, when they were some distance from any place of shelter, for they had ventured out upon the mud of a creek, at low tide, and I chanced to come out of the high grass, just in front of them. The old Duck appeared to comprehend the situation at once, for she came directly toward me, driving her brood before her, hoping to engage my attention by a display of bravery, while the young escaped into the sheltering vegetation behind me; but placing my gun on the ground, I stooped down and grasped two of the little fellows, as they were running past. The diminutive ducklings uttered shrill cries when they were captured, which drove their parent nearly frantic, for regardless of possible consequences, she dashed about in front of me, with ruffled feathers and half closed wings, often coming within a foot of me, at the same time, quacking loudly. This out cry attracted the attention of the drake, but he did not approach very near, merely circling

about, some fifty yards distant, quacking softly. Leaving the old female to care for the remainder of the brood, I carried my captives into camp and placed them in a box, the sides of which were about a foot and a half high, but young as they were, they managed to escape.

On the Magdalen Islands, the Black Ducks deposit their eggs during the last of May or first week in June. When in company with Mr. Wm. L. Breeze, near the first of July, I discovered a brood of about a dozen young, my attention being attracted to them, by a whistling sound which they made. They were sitting huddled together, in the top of a small spruce which was lying prostrate over a small stream that flowed through a little ravine. The old duck was absent, and by making a sudden dash at them, I managed to capture three, before they were aware of our presence. The rest dropped into the shallow water, some diving, others creeping into holes, while some sought shelter beneath the roots or overhanging moss; in short, they managed to conceal themselves so effectually, that we only succeeded in finding one which we took out of the water from beneath a stone.

Wild Black Ducks are frequently reared by the inhabitants on the Magdalen Islands, and readily mix with the domesticated race which, however, evidently originated from this species; and those I captured, I resigned to the care of an old lady, who had a brood of domestic birds, but from some unaccountable cause, they soon died.—From Maynard's *Birds of Eastern North America*.

Feeding Habits of the Scarlet Flamingo.

One of the favorite winter haunts of *Phoenicopterus ignipalliatu*s is found on the sandy beaches that abound on the west coast of South America, at about latitude 42° South.

On the north coast of the large island of Chiloe, there are several places of this sort where these beautiful birds may be seen in flocks of hundreds during the months of June, July and August, the winter months in that region.

I remember the first time I walked over one of their favorite resorts. It was on the Pudeto river, near the small town of Ancud. The tides here are rather high owing to the formation of the bay, and as a consequence it enters the river and floods great stretches of sand that border the left bank. As the tide goes out the Flamingoes may be seen here by hundreds. The first time I visited the place the tide had been out some hours and there were no birds to be seen. I was disappointed, for the trip had been made for that special purpose.

However my attention was soon attracted to long rows of small hillocks of sand, or rather, to be more exact, circular ditches in the sand that appeared to have been made while the water was still present. These were about two or two and one-half feet in diameter by five or six inches wide and three or four inches deep. This, of course, gave the central portion the appearance of a small hill about eighteen or twenty inches in diameter. Upon inquiry I could get no information—no one had any idea how or by whom they had been made.

A few days later the mystery was solved when a second visit was made to the place at a more propitious moment.

Upon approaching to within a few hundred yards of where a regiment of these scarlet beauties was lined up, the birds took flight and it was then that I discovered who were the authors of my mysterious little hills.

By subsequent observations I found that the birds took their stand in the water when it was about a foot and a half deep, and at more or less regular intervals about eight or ten feet apart.

Here they remained stationary and turned round and round with their heads under water, catching the small crustaceans that seem to be their principal diet. The form of their beak is such that when it is placed on the ground the upper mandible is underneath. This being large and strong, soon opens up the circular depression that first called my attention. Before the tide is all out they usually leave because the crustaceans have by this time hidden in the sand.

The Flamingo frequents this coast only during the winter months and consequently does not nest here, nor is it known to nest west of the Andes mountains. Their nests and young, however, have been observed in great numbers in the small lakes of brackish water that abound on the plains of Patagonia east of the mountains. Undoubtedly these are the same birds that spend their winters in Chile, the lofty Andes proving no barrier to their flight. There are many roads by which they can pass, the mountains being intercepted by frequent rivers that empty into the Pacific, and have their origin beyond the snow-covered Andes, in the plains of the Argentine Republic.—J. C. Hambleton in *The O. S. U. Naturalist*.

An Albino English Sparrow.

The European House Sparrow, which is generally known as "English Sparrow," was not known in this country fifty years ago, but today is scattered over our states from the Atlantic to the Pacific and from the Lakes to the Gulf. This detestable little Sparrow has driven almost all our song birds from our midst, such as the Bluebird, Martin and Wrens.

These Sparrows, together with the Bronzed Grackle, have about taken possession of our city. Each evening the air is filled with these blackbirds coming in to roost in the large maple

shade trees that line the streets of our beautiful city.

Everywhere we go, through city or country, we see hundreds of these Sparrows which are a pest to the farmer as well as the citizens of our towns. Among the thousands that we see every day I had never seen an albino, but on last Decoration Day a young man who knew that I was interested in birds came to my house and said that his father had killed a small bird that morning that was pure white, which he had intended to bring in to me but had come off forgetting it. Knowing that it must be a rare bird of some kind, I at once got into my buggy and started for his home, a distance of five miles in the country. Arriving there I was given the specimen, which upon examination I found to be an albino European House Sparrow. It was pure white, not a colored feather on it.

It had been with the "English Sparrows" around the barnyard. I found the bird in a very bad condition as it had been killed with No. 7 shot, but I brought it home, cleaned it off nicely and after a great deal of hard work got a very nice mounted specimen which I now have in my collection.

This is the only pure white albino I have heard of in our state for five or six years. There have been a few noted, but there were none of them, so far as I know, that were pure white. I will not take up any more of your space, but if this letter is of sufficient interest to justify publication will send in a few notes at some future time.

Hoping to hear from any bird students over the country and with best wishes for the OÖLOGIST I close.

G. G. WELSH,
Greensburg, Ind.

The Arctic Three-toed Woodpecker.

In your April issue Mr. C. F. Posson mentions the Arctic Three-toe as a rare species in Western New York, even

north of the 43d parallel. In Michigan this Woodpecker is not rarely found as far south as the 43d parallel and I know it to be a regular resident at 43 degrees, 30 minutes north latitude. I do not think this Woodpecker wanders much and it can generally be relied upon as a resident where found. I have seen this species in Kent and Montcalm counties, Michigan, which are approximately latitudinal with Orleans county, where Mr. Posson's specimens were taken. The Arctic, which is abundant in Michigan north of the 44th parallel is much more generally distributed than its near relative, the American Three-toed, which is exceedingly rare in this state; and I have never met with the latter. H. Nehrling is credited, Cook's "Birds of Michigan", with saying that the American Three-toed is not rare in the Upper Peninsula.

The Arctic is a very retiring species and must be hunted for in the deep woods, and is more frequently found in the pineries. There is no doubt that the nest could be found if the observers of Michigan would make a search in the proper locality in the state.

MORRIS GIBBS,
Kalamazoo.

The Belted Piping Plover.

(*Agialitis meloda circumcincta*.)

This interesting little Plover arrives here to breed about the first of May, but does not commence housekeeping until the middle part of the same month.

I have found a set of two eggs the 13th of May which I presume is about as early as they commence laying in this locality.

Their favorite nesting site seems to be the barren sandbars in the rivers, although I have found a nest of this species on a sandbar which had quite a growth of young willows.

They scratch several shallow holes in the sand and seem to take possession of the driest one.

In a dry season they very seldom line their nest but in a wet season they will occasionally line it with pebbles and bits of dried twigs.

I have found them to lay two and three sets in a season, but seldom three except when their nests have been robbed. I have never found the birds setting on their nests, but which I presume they do during the night.

GEO. P. ANDERSON,
Dannebrug, Neb.

Queer Nesting.

On June 4th, last I found a nest of Mountain Quail containing 11 eggs of this bird and 9 eggs of the Ring Pheasant. This is the first time that such an occurrence has come under my observation. The Quail was setting on all the eggs and incubation was about one-fourth advanced. The Ring Pheasant was not about and has not been seen since setting has begun. How the little quail kept possession of her nest is a mystery as the Pheasants are fighters, and generally drive off the other birds.

A. G. PRILL,
Scio, Oregon.

Notes.

If you will observe the Blackbirds when they are giving their call notes you will find that they first ruffle up the feathers or slightly elevate the wings preparatory to issuing the notes. This motion of the wings tends to lighten the weight and the bird rises slightly if upon a slender branch; then a call is given and the bird settles back, dropping to its first position. It is very interesting to observe the flight when the notes of a bird are given on the wing. Notice the flight of the Woodpeckers and the Goldfinch as they utter their notes when on the wing. You will find that the habit rarely varies in any one species of bird.

G.

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